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Oil Painting by Jno. James Audubon.

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OLD SERIES VOL. XXII. NEW SERIES VOL. XVII.

AN HITHERTO UNPUBLISHED PAINTING BY AUDUBON.

BY R. W. SHUFELDT, M.D.

It was during the month of May, 1895, that the writer had occasion to visit the late Mrs. John Woodhouse Audubon, the widow of a son or John James Audubon, the ornithologist. The home of this venerable old lady was at Salem, Washington County, in the State of New York, and during the week or more of my visit, permission was given me by the eldest daughter of the family to photograph a number of the old Audubon paintings, and other objects of interest, with the view of some day giving published descriptions of them for permanent preservation in literature.

At the time mentioned, some thirty or forty negatives were made by me of various subjects, and this valuable series still forms a part of my private collection. Among them is an excellent colored drawing of the common European jay (*Garrulus glandarius*) by John Woodhouse Audubon, published by me a number of years ago, but the reproduction was so much reduced and so indifferently done, that it is just possible it may have sufficient historical interest, to warrant its publication again in some other connection. Very few examples of the kind, by this son of Audubon's, have ever been given to the world, and, indeed, being a man of very erratic habits, he very rarely finished the drawing and painting of a bird he ever

commenced, — and not many were commenced by him. There used to be in existence an unfinished painting in water colors of an Arcadian Owl of his, but it is a poor thing, and does not promise much, e'en had it ever been completed.

By far the most interesting paintings discovered by me, at the time and place mentioned, consisted in two or three large canvasses done in oil by the father, John James Audubon, the author of the "Birds of America," and these were, among other dust-covered relics, stored away in the attic of the Salem house.

Only one of these canvasses was in any condition to be photographed, for, being upwards of a century old, it was dull, and cracked, or rather cracked like old china, and, withal, more or less dim. Then, my photographic experience was somewhat limited in those days, and old oil paintings are difficult subjects for the camerist at the best.

However, this painting was dusted off and placed in the attic in as favorable a light as possible, and two dry plate exposures (5x8) were made that made pretty fair negatives after they had been submitted to intensification. The reproduction of a photograph made by me from the better of these two, illustrates the present contribution. It will be observed that Audubon painted here three barn-yard fowls in rather spirited attitudes. One of these fowls is evidently a common cock, while the other two are hens, apparently of the Polish breed, or perhaps Houdans. This scene is one to be observed upon almost any day in any hen-yard, or upon the farm, and originally the painting must have been one of some considerable merit.

It is not generally known that Audubon was ever given to producing such subjects as this in oil, — life size, for in this particular picture the fowls are life size. To the best of my recollection it was painted by him in Philadelphia. It belongs to a class of work that he did purely to make quick sales in order to support himself while engaged in painting and describing birds for his volumes on American ornithology.

Likely it is, too, that in the sale of some of these pictures he was disappointed and did not succeed in getting a purchaser for them. This is doubtless one failing in that category, and, never having been sold, drifted eventually into the garret of the Salem house.

It is said that he painted such pictures with great rapidity, and at different times early in his career, supporting himself almost entirely by their sales. Few there are who know all there is yet to be known in the life of that remarkable man, and the making of these pictures is a bit of it. In fact there is a whole lot of Audubonian history that the world is not, up to this time, in possession of, that later on may possibly appear

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BIRDS SEEN ON THE OTONABEE RIVER, CANADA, IN AUGUST.

BY FRANK N. SHANKLAND.

Although home may be the best place in the world for a person to spend the greater part of the year, it is a very poor place to spend a vacation, for when vacation time comes, it is nearly always desirable to seek fresh fields, where life has a different flavor. Furthermore, if one is to derive the greatest possible benefit from a vacation trip, he should by all means have some definite object in view when he sets out. If he has a fad or hobby, he should plan to give it much of his time during vacation. Happy indeed is he who has a hobby which will take him into the wilds of Nature.

Owing to the fact that ornithology has always been the author's favorite recreation and pastime, he usually arranges to spend his vacation in places where birds are abundant, and where there is a possibility of making the acquaintance of some species not found near his home in northern Ohio. One of the pleasantest of all the vacation trips that I have ever taken, was one to the Otonabee River in eastern Canada during the summer of 1907. The objects of the trip were two-

fold. In the first place, I wished to visit some young men of my acquaintance who were in camp on that river at that time, and in the second place, I figured that I would be able to see and study many strange birds while there, and thus take a new hold on ornithology. It was an easy matter to make the necessary arrangements for the trip, and on the evening of July 31, I found myself comfortably installed in a Grand Trunk R. R. passenger coach on the way from Toronto to Peterboro.

While traveling by rail through a strange country, one can often learn a great many interesting things, not only about its general features, but also about its fauna and flora. During my ride from Toronto to Peterboro I kept this fact in mind and maintained a sharp lookout for birds, trees, animals, and unique features of the landscape. It goes without saying that I was well repaid for my efforts.

While passing along the north shore of Lake Ontario, one sees but little in the way of interesting scenery, save occasional glimpses of the lake and of dusky evergreen forests. After passing Port Hope and plunging into the interior, however, one finds a wild, picturesque and hilly country, that is very pleasing to see. Here the frequent appearance of log cabins and slab-houses reminds the traveler that he is in a new country, and one that has but recently been wrested from its primeval inhabitants. Another peculiarity about the farming districts of this country and one that immediately appeals to the eye of the observer, is the abundance of "stump fences." No doubt the pioneers of the country had considerable difficulty in disposing of these huge stumps, and owing to the scarcity of fence material, they conceived the idea of dragging them into rows and making rude, impromptu fences of them. In this way they killed two birds with one stone. As a matter of fact, however, these fences have always been considerable of a nuisance by reason of their furnishing a ready and safe hiding place for the woodchucks, skunks, weasles, and other destructive wild animals.

The farms that were passed by that afternoon were nearly all picturesque and attractive, and it was a genuine satisfaction to gaze upon the steep grassy hillside pastures, where sheep and cattle were grazing in dreamy contentment. In the forests through which the train threaded its way, were to be seen many varieties of strange trees, such as the white birch, the spruce, the cedar, the tamarack, and occasionally a tall, dusky pine.

In the meantime, I had been maintaining a sharp lookout for birds while thus riding along, and although a solitary Bittern, that rose from a marshy river bottom, was the only stranger that I noted, nevertheless I had the satisfaction of recording a number of very interesting species with which I was already familiar. While passing along the north shore of Lake Ontario, we saw numerous Herring Gulls, some wheeling about over the water in search of food; others resting upon piles and driftwood at considerable distances from the shore. As we neared Oak Point, we noticed that Bank Swallows were very plentiful, and a little further on we passed the sand bank in which a colony of these birds nested. Near Port Hope, Bobolinks were still abundant, although elsewhere in that territory but few of them were to be seen. Occasionally as we sped along, a Sparrow Hawk would rise from its perch on the telegraph wires and fly swiftly away across the fields toward the distant forests. Meadowlarks were very abundant in this territory, and flock after flock of them rose and flew swiftly away as our train passed them by.

But of all the land birds that we noted, none were as abundant or as bold as the Crows. There seemed to be Crows everywhere — in the woods, near the rivers, in the fields and on the shores of the lake. During that afternoon ride I counted hundreds of them, and was convinced that they were at least five times as abundant in that territory as they are in northern Ohio. Scarecrows are also abundant, but apparently ineffective. The appearnce of Crows in such numbers in this territory is undoubtedly due, partly to the abundance of food in

the sparsely settled rural districts, and partly to the numerous dense forests thereabouts, which afford ideal nesting-places.

As we made our way slowly up the steep grade from Millbrook to Peterboro we saw other interesting birds. A pair of Black-billed Cuckoos flew leisurely away as we passed by a clump of wild cherry trees near the tracks, and after the train had pulled into the station at Peterboro, we were greeted by the welcome and familiar calls of Nighthawks and Purple Martins.

At nine o'clock on the following morning I found myself comfortably seated in the bow of the pretty little steamer Otonabee, which was lying at the wharf in Peterboro, in readiness for a start down the river. A few minutes later we were off for a twenty-mile ride down the picturesque Otonobee River to Rice Lake.

For a nature lover there is always a peculiar fascination about riding on a strange river, for it gives him an opportunity to study nature from a very advantageous position. There are surprises in store for him at every bend of the stream; new scenery and new landscapes are continually greeting his eye; now a picturesque little camp in some woodland clearing or sheltered hillside come into view and remind him of his own experiences and adventures while camping out in the wilderness; now a large black bass, leaping out of the water with a splash, makes him long for an opportunity to try his luck at angling; now his attention is attracted by a strange waterfowl, flying up from the reeds at the water's edge and flapping heavily off up-stream; now a family of muskrats, disturbed at their feeding, swim smartly off up some gully or dive out of sight with a splash; presently the boat rounds a rocky promontory and some strange animal, apparently a fox, is seen scudding up the adjacent hillside to the shelter of the woods. In a word, riding along a strange river in a boat is like examining a series of interesting pictures. While taking such a ride, however, one has the added advantage of being able to breath the cool, refreshing river air, enjoy the glory of the summer skies and see the interesting sights at first hand.

The Otonabee River has its source in the Stony Lake region north of Peterboro; it flows in a southerly direction and empties into Rice Lake — a beautiful little sheet of water lying about twenty miles north of Lake Ontario. Thanks to a number of well-built locks, it is now navigable for nearly its entire course and the chances are that it will some day become an important commercial waterway. The Indian word "otonabee" means tortuous, and it is peculiarily appropriate as a name for this river, since the Otonabee is one of the most winding and tortuous streams in that region, and in traversing a single mile of its course, one often faces every point of the compass. The waters of this river are deep, black and sluggish, and they teem with numerous species of fish and reptiles. Its margins are bordered by numerous swamps and marshes, many of which are over a quarter of a mile wide. Among the sedges and reeds of these marshes numerous species of waterfowl build their nests and rear their young, undisturbed by hunters or specimen collectors. Here also, thousands of muskrats, dozens of minks, and a few otters still make their homes, in spite of the encroachments of civilzation. The fact is, that these impenetrable swamps and marshes have enabled the native birds and animals of this region to escape the destruction that almost invariably accompanies the invasion of man.

While comfortably installed in the bow of the little steamer, as it ploughed its way swiftly down the river, I maintained a sharp lookout for the birds, and was rewarded by seeing many interesting species. Of the river-haunting birds, the Belted Kingfishers were the most abundant and we flushed them from nearly every overhanging dead tree from Peterboro to the lake. At the approach of our boat, they would sound their defiant rattles and fly rapidly off down the river, their blue backs, rufous belts and white under parts showing off to good advantage in the bright morning sunlight. These birds seemed to possess to a noticeable extent the wild untamed spirit of this picturesque northern river, and their every movement expressed freedom, happiness and love of their chosen

haunts. Occasionally one of them would hover over a certain point in the water like a Sparrow Hawk, and then dive down with a splash, to appear a moment later with some unlucky minnow in its bill. I also noticed that these Canadian Kingfishers are persistent law-breakers, since they were known to catch dozens of fish less than ten inches long, this being in violation of the Dominion statutes. Nesting holes of this species were also to be seen at intervals along the river. As we passed by one long sandbank, about ten feet high, we noticed a number of smooth round holes, about five inches in diameter, that had undoubtedly been occupied by Kingfishers earlier in the summer. At the time we went down the river, however, they were apparently deserted, although possibly many of the young birds that had been reared in them, were hiding along the banks of the river at that very moment.

But by far the most conspicuous birds that we saw while on the river, were the Great Blue Herons. In northeastern Ohio, this species occurs only as a rare migrant, but on the Otonabee River it is abundant, and in less than two hours I had counted forty-three individuals. Their immense size and peculiar habits made them objects of interest to everyone who saw them, whether interested in birds or not. Some of them were standing motionless in the shallow water at the edges of the river, watching for fish and reptiles; others were flapping heavily about over the river with their long legs stretched out behind them like rudders, and with their long necks bent double like a letter "S": still others were perched in grotesque attitudes among the topmost limbs of the tall trees that grow on the banks of the river. While attempting to alight on a dead limb in the top of a tall tree, one heron lost its balance and came near falling. The clumsy bird soon regained its equilibrium, but its efforts to regain the coveted perch were grotesque and comical in the extreme. After much awkward flapping of wings and craning of neck, however, the ungainly bird finally succeeded in securing a firm foothold on the dead limb, much to the relief of us spectators. As we passed by a strip of

marsh some distance further down the river, a heron flew up from the water with a medium-sized snake writhing and twisting in its bill. Upon speaking to one of the members of the boat's crew about this incident, I was informed that the herons were fond of snakes, and that it was no unusual sight to see them carrying these reptiles away in their bills.

I afterward learned that these herons were accustomed to breed in a heronry, located in the midst of one of the most inaccessible swamps in that vicinity, and that more than two hundred nests have been seen there in a single season. They are rigidly protected by the Dominion laws, and collectors are not even allowed to procure eggs for their collections.

Another interesting species of waterfowl, of which we saw a few individuals while riding down the river, was the Bittern. Although not nearly as abundant as its greater congener, the Great Blue Heron, nevertheless this species was fairly common on portions of the river, and in the extensive swamps located about a mile north of Rice Lake. Not having had the pleasure of seeing a Bittern, except in museums, prior to that Canadian trip, I was somewhat puzzled when, as we approached a long stretch of marshy territory, a large ochraceus-brown bird flew up from a clump of cat-tails and made off down the river. The bird's flight, although heavy and flapping, was swift, and in less than half a minute it had disappeared around a bend in the river.

Two days later, while paddling about in that same locality, I had the pleasure of seeing four adult Bitterns and several young ones, and also of hearing the strange, unearthly calls of these shy denizens of the marshes. After hearing these calls, one appreciates the appropriateness of the nickname "thunderpump" applied to this species by the fishermen.

After we had traversed about one-half the distance from Peterboro to Rice Lake, we entered a long stretch of wild, marshy territory, where the river was deep and sluggish, and where tributary creeks and brooks emptied into the main channel at frequent intervals. Here the river proper was

bounded on either side by swamps and marshes, some of which were nearly half a mile wide. These swamps and marshes are a favorite haunt of many species of wild ducks, and as we proceeded on our way, we saw flocks of Mallards, Black Ducks and Wood Ducks flying about over the water or resting upon its surface. Once, as the little steamer rounded a sharp curve on the river, a large flock of "Black Sawbills" (Hooded Mergansers) rose from the water with a splash, and flew swiftly off down stream.

The sight of a flock of wild ducks always appeals very forcibly to a nature lover or an ornithologist, no matter whether he be gazing from an office window, or looking out from the prow of a canoe in the midst of some wilderness marsh. The fact is that all wild ducks are imbued with the wild, untamable spirit of the primeval wilderness of four hundred years ago, and their wary, furtive habits, their characteristic rapid flight, and their wild picturesque haunts all interest us and take us back to the good old colonial days when North America used to teem with them. Fortunately for ducks and duck students, the numerous Canadian marshes and rivers still afford safe breeding places for many species, and as I sat there in the prow of the little steamer watching, as flock after flock of them rose from the water and winged their way swiftly across the marshes, I was thankful indeed that they were so abundant, and so well protected in these, their summer breeding-places.

Of the land birds that we saw while riding down the river, the swallows were the most numerous, four different species being noted. Three of these, the Barn Swallow, the Bank Swallow and the Purple Martin were old acquaintances of mine; but the fourth, the Tree Swallow, was practically a stranger. In northeastern Ohio, these birds are only occasionally noted during the migrations, but along the Otonabee they were abundant, and could be distinguished from the other species by the steel-blue coloration of their backs and the pure white of their under parts. Their flight, however, closely re-

sembled that of the other species of swallows, and I would never have suspected them of being strangers at the distance they kept, had not my attention been called to them by one of the passengers. While passing through a woody marsh at some distance further down the river, the same passenger pointed out a number of small round holes in dead limbs and tree trunks, that he said had undoubtedly contained fresh Tree Swallow's nests earlier in the season, for unlike their congeners, these birds are accustomed to build their nests in holes in stumps, cavities of dead trees and similar places, after the manner of Bluebirds and English Sparrows.

While riding down the river, I also watched for Cliff Swallows and Rough-winged Swallows, but both of these species were conspicuous by their absence, and it is probable that neither of them ever penetrates so far north.

In the meantime, the little steamer had been making its way rapidly down the river, and at eleven o'clock we rounded the last curve and steamed out into the sparkling greenish-blue waters of Rice Lake. This beautiful little sheet of water is situated about twenty miles north of Lake Ontario and is fed by the Otonabee River and several lesser streams. It is approximately twelve miles long and two miles wide and is surrounded on all sides by gently sloping hillsides, some of which are forest clad, while others are covered with prosperous looking farms. A branch of the Grand Trunk Railroad once ran across the lake from Harwood to a point near the mouth of the Otonabee, but unfortunately a long section of the track was washed away by the high water soon after the road was completed, and this disaster so discouraged the operators of the line that they abandoned it entirely. At the present time a long embankment of rocks and earth, extending nearly a mile out into the lake from Harwood is the only remaining monument of the ill-starred project.

Another interesting fact about Rice Lake is that the Mississauga Indians still dwell in some numbers in the vicinity of it. These Indians make their living by hunting ducks, geese,

and waterfowl during the open season, by trapping fur-bearing animals in the winter and by fishing, acting as guides and doing farm work during the spring and summer. The squaws are often seen gathering the wild black rice that grows in great abundance in the marshes on the shores of the lake, and on account of which the name, "Rice Lake," was given to it.

As has already been suggested, one of the principle reasons why I decided to spend my vacation on the Otonabee River was because three young men of my acquaintance were enjoying a month's outing on its banks and had invited me to make their camp my vacation headquarters. Upon reaching Gore's Landing, therefore, I immediately rented a birch bark canoe, and after securing some information from the hotel keeper, paddled back across the lake and up the river to a point about a mile distant from the mouth. Here I found my three friends cozily and comfortably established in a picturesque little wooden hut, located on a gentle slope of land on the east side of the river. This hut was built in a little clearing bounded on three sides by thick woods, and on the fourth by the river. It was an ideal place for a camp, and I was overjoyed at the prospect of spending a week amid such delightful and picturesque surroundings, and with such good prospects for studying many different species of interesting birds and animals.

One of my hosts was a medical student and amateur photographer; another was an instructor in German in an eastern college, and the third was a young lawyer. All three were enthusiastic lovers of nature and out-of-door life and all were agreed that the Otonabee River and the adjacent country constituted an ideal camping-place. Their cordiality and hospitality made me feel perfectly at home from the start, and by the time dinner was over I had learned from them many interesting facts about the river, the lake, the surrounding country and the fauna and flora of that region.

That evening, after we had finished our supper and washed the dishes, we all repaired to the front porch of the camp to

watch the sunset and enjoy the wild beauty of the surrounding landscape. The scene that lay before us was typical of the Canadian wilderness. The deep, black waters of the Otonabee were spread out before us like a vast mirror, reflecting perfectly the forest-clad slope across the river, the sun, slowly sinking among the distant wooded hills, was painting the few scattered clouds with exquisite shades of red, purple and roseate; a silence, deep, impressive and soothing, pervaded the wilderness. Once a Great Blue Heron came flying slowly down the river, and momentarily broke the silence with its heavy flappings, and once a large muskrat swam down the river past our camp, but at sight of us it dove out of sight with a splash. As darkness began to settle down over the river a large bullfrog began to twang away from the marsh in a superlatively deep basso voice; not long after many other frogs added their notes to the stentorian chorus, and the effect was novel and pleasing indeed. Just as the moon was rising above the tops of the spruce trees in the rear of our camp, some large bird, probably an owl, flew noiselessly past us, and after crossing the river, disappeared in the forests beyond. All such sights and sounds have a peculiar charm for a lover of the wild things and they help to stimulate his interest in the study of the different creatures and natural wonders about him.

But camping on the banks of the Otonabee is not without its drawbacks, and during the course of that first evening I discovered that one of the greatest of them was the abundance of mosquitoes. These persistent little nuisances fairly swarmed all along the river and in the adjacent marshes. They were so bothersome that the campers along the river were compelled to remain closely indoors during the evening and to protect their porches and windows from invasion by means of wire netting. Our porch had been rendered almost mosquito-proof by having been completely enclosed in a set of screen doors and screens. Even then a few tormentors were always on hand to bother us, although we did not let them prevent

our enjoying the long, pleasant evenings together. Whenever one of us had occasion to venture outside the friendly protection of the wire netting after sunset, he invariably wore a mosquito-proof cage on his head and thick gloves on his hands. No wonder that we often bemoaned the fact that there were no nocturnal flycatchers to prey upon these insects and keep them within bounds.

That evening we had the pleasure of a call from an old back-woods-man, who lived in a log hut across the river. My companions had made his acquaintance some days before, when he had stopped to show them a strange bird that he had killed, and which proved to be a Least Bittern. Our visitor was about fifty-five years of age, and had spent the greater part of his life near the Otonabee River and Rice Lake. In fact, the campers and tourists had learned to consider him as much a part of that locality as the hills, forests and other natural features of the place. He lived by hunting, fishing, trapping, river-driving and wood-chopping, and it was rumored that he had accumulated a modest fortune in real estate and money. He was a confirmed back-woods-man, however, and had no taste for ordinary civilized life or its customs. Although, as a rule, he was a man of very few words, nevertheless, as the evening wore on, he became quite talkative and recounted to us quite a number of his adventures and experiences in the wilderness.

His narratives were graphic and interesting, and he was very careful not to exaggerate. Among other things, he told us that during one winter, in the early seventies, he had succeeded in trapping seven hundred muskrats, twenty-eight minks, forty-two martens, four otters and two beavers, besides a number of other fur-bearers. He also advised us that during one summer he had shipped four hundred dollars worth of bass, trout and muscallonge of his own catching, to the Toronto markets.

In answer to an inquiry from me as to the abundance of the wild ducks in that locality, the old traper made the following statement:

"Although the wild ducks are not nearly as abundant now as they were fifty years ago, they are still quite plentiful in the river marshes in summer, and all along the river and Rice Lake during the spring and fall migrating seasons. In fact, during the fall season, they often fairly swarm all along the river and on the lake, where flocks containing many thousands of individuals are often seen.

"The largest single company of ducks that I ever recorded was an immense flock seen on Rice Lake on Sept. 29, 1888. Prior to that date, a cold north wind had been blowing for two days, and as a result of it, waterfowl of many different species were winging their way southward. That morning I took my shotgun and canoe and paddled down to Rice Lake to see if anything of interest were transpiring in its vicinity. When I reached the mouth of the river and gazed out across the lake, a strangely interesting sight met my gaze. Above the middle portion of it the air was fairly alive with wild ducks of many different species. As far as the eye could see, they were circling through the air or hovering over the water. Some minutes later they began to settle down at a distance of half a mile from the northern shore, and after nearly all had alighted, they made the lake look black over an area more than a mile long and 100 feet wide. I sat still in my canoe watching them with eager eyes for a long time, until finally I noticed that they were becoming restless. Then, upon looking about to find the cause of their uneasiness, I saw a party of Mississauga Indians approaching them from the east in canoes. Soon after, the Indians opened fire upon the ducks, thereby causing the entire company to rise from the water and commence circling about over the lake again. Up till that time I had contented myself with sitting idly in the canoe enjoying the scene, but when I saw the ducks dropping into the lake by the dozens before the effective aim of the redskins, I paddled out within range and opened fire on my own account. It goes without saying that I secured all the ducks I wanted, and when ten o'clock came there were seventy-two dead birds in the canoe.

There were Mallards, Lesser Scaup Ducks, Redheads, Golden-eyes, Red-breasted Mergansers, Hooded Mergansers, Baldpates, Canvasbacks, Teal, and one White-winged Scoter. Never since then have I seen as many wild ducks in a single day."

After the old hermit had completed this narrative, he bade us farewell and set out for home. We watched him until he had paddled across the river, then we locked the doors and retired for the night, for it was after ten o'clock, and we had planned to start on a fishing trip at four the following morning.

Our sleep was not destined to be without interruption, however, and before morning came we were awakened several times by various prowlers. At about eleven o'clock I was aroused by the loud hooting of a Great Horned Owl, which seemed to issue from the tall trees at the rear of our camp. The bird continued to hoot from time to time for a period of about twenty minutes, after which it must have flown away, for the sounds ceased. Although I disliked to have my sleep broken, I must confess that I rather enjoyed this weird serenade, for there was something so wild and primeval about it that it appealed strongly to the romantic fibers of my makeup. These owls are still fairly plentiful near the Otonabee and are apparently bolder and more rapacious than their northern Ohio cousins.

Once during the night we were startled by hearing the melancholy, tremulous calls of a Screech Owl from some point close at hand. The calls were so clear and distinct that we concluded that the bird was sitting upon the roof of our hut. During the earlier watches of the night we also heard a Whip-poor-will emitting its lonesome, mournful calls. By eleven o'clock, however, it had either desisted or retreated to some more remote rendezvous.

Along towards morning some four-footed prowler visited our camp. We heard it scratching about in our garbage pile and near our back door for some little time. It might have

been a raccoon or opossum, or perhaps some straggling lynx that had taken a fancy to our discarded meat scraps and fish heads. We made no attempt to molest it, and it finally went away.

At half-past four the following morning we arose, ate a light luncheon of crackers and cheese to tide us over until breakfast time, and then set out on a short fishing trip down the river. The morning was one of those rare and beautiful ones that fill the body with vigor and magnetism and render all the senses keen and alert. Above the hills in the east the first glow of dawn was becoming visible; among the forest trees, thrushes, warblers, and sparrows were singing their matin songs; in the waters of the river hundreds of fish were seeking their breakfasts, and at intervals one of them would leap out of the water to snatch some passing insect and fall back into the water again with a splash. As we rowed along, Kingfishers greeted us from time to time with their rattling calls .and as we passed by strips of sandy beach, Spotted Sandpipers uttered their musical "weet weet" calls and flew away down stream, keeping so close to the water that they seemed to almost touch it. A mist hung over the river and marshes, and for that reason we failed to notice a flock of Black Ducks until we were almost upon them, when they arose from the water with a great splashing of wings and made their way quickly out of sight down the river. There is a pleasure in being amid such scenes and surroundings that cannot be adequately described. It is a deep, subtle, and healthful joy that seems to appeal to all the senses at the same time. You who are lovers of nature and the out-of-door life will understand and appreciate it, for you have undoubtedly experienced the same joy many times while sojourning in the wilderness.

After we had reached a propitious looking stretch of deep water, my companions ceased rowing, dropped the drags overboard and prepared to do some angling. I followed their example, and soon all four of us were intently watching our

floats for the first signs of a catch. It must be confessed, however, that my attention was not so taken up by my fishing that I did not find plenty of time to observe the interesting species of birds that were to be seen in that vicinity.

While sitting thus in our canoes waiting for the fish to "bite," we noticed a strange bird swimming across the river at a point about fifty yards below us. It bore some resemblance to a small duck, but its bill was shorter, stouter and not so flat as a duck's, and its plumage was somewhat different from that of any duck we had ever seen. The bird swam steadily across the river on a "bee line" until it was within ten feet of a clump of cat-tails on the west bank; then it disappeared as if by magic and we saw nothing more of it for some little time. The suddenness and manner of the bird's disappearance at once convinced us that it was a grebe or diver and we therefore remained motionless in our boats, hoping to see it reappear in that vicinity. It was fully two minutes, however, before the little feathered amphibian emerged from the water, and when it did so, it was many yards distant from the point where it had disappeared, and was swimming rapidly away down the river. We knew that it would be madness to attempt pursuit, so we resumed our fishing. A few minutes later another grebe came swimming down the river towards us. As soon as this bird caught sight of our boats, however, it also dove, but instead of sinking gradually out of sight as the first one had done, it sprang up three or four feet into the air, as if to get a good start, and then plunged straight down into the water with a splash. This was the last we saw of this second diver. Both birds were Pied-billed Grebes, and we were informed by the old hermit that this species is of common occurrence in summer all along the marshy portion of the Otonabee. During my stay in camp I saw several more of these interesting little divers; in fact a pair of them used to appear on the river in front of our hut every morning just at sunrise.

Two other species of grebes are of quite common occurrence near the Otonabee River and the adjacent marshes at the

proper seasons of the year. The first of these, the Horned Grebe, is of about the same size as a Pied-billed Grebe, but may readily be distinguished from the latter species by its prominent "horns" and white throat. This species is not of very common occurrence along the Otonabee, and although we saw two or three birds that we supposed were Horned Grebes, we were unable to positively identify them as such. They are said to breed sparingly in the marshes.

The Holboell's Grebe, a bird of larger size and more striking appearance than the ones already mentioned, appears regularly on the Otonabee River only during the spring and fall migrations, as its breeding-grounds are in the primeval wilderness of the far north. During the fall season, Holboell's Grebes are quite conspicuous birds, being about the size of Mallard ducks, and distinguishable from other waterfowl by their white speculum, and from other grebes by their larger size. They appear on the Otonabee River and Rice Lake at about the same time as the Loons, the Canada Geese, and the Whistling Swans.

In the meantime, one of my companions, more lucky than the rest of us, had succeeded in hooking what appeared to be a good-sized fish, and a moment later he was experiencing some of the delightful difficulties of attempting to play a fish from a light birch bark canoe. The performance was intensely interesting, however, and he finally had the satisfaction of landing a handsome sixteen-inch black bass, although not until it had made a desperate fight for life and freedom. Ten minutes later another of my companions hooked and landed a muscallonge twenty inches long. This is one of the commonest species of fish in these waters, and individuals often weigh more than one hundred pounds. During the next twenty minutes, each of my three friends succeeded in catching at least one fish, and in half an hour after we had commenced fishing, there were five bass and two muscallonge in the bottoms of the canoes.

It was not my lucky day, however, and I failed to even get

a good nibble. After waiting patiently for half an hour, therefore, I took one of the canoes and paddle into the marshes in quest of interesting birds. In this expedition I was more fortunate, and before I had penetrated forty feet into the marsh I descried a pair of strange birds, which proved to be Long-billed Marsh Wrens. They were hopping about among the cat-tails, and when they saw my canoe approaching they commenced scolding so vigorously and loudly that I began to suspect that they had a nest in that vicinity. This theory proved to be correct, for just as I was paddling past a thick clump of cat-tails I caught sight of a roundish mass of dried grass and weed stems, located in the undergrowth at a distance of two feet above the level of the marsh. The nest was shaped like an English Sparrow's, having a roof or dome above, and a round entrance about three-quarters of an inch in diameter in the side facing the river. The eggs, nine in number, resembled House Wren's eggs, except that instead of being reddish-brown, they were of a rich chocolate-brown color. While I was investigating this little home, the parent birds kept scolding away with desperate vigor, and while doing so, they would often hang head downward from the reeds as if overcome by anger and despair. In fact, their actions caused me to feel as if I were some thieving kidnapper, and made me wish to get away from that locality as quickly as possible. Their cries were much louder and harsher than those of a House Wren, and their rattling song which I heard a few minutes later, was not nearly as pleasing as that of the more familiar species

During the next half hour I saw many more of these wrens as I paddled about through the marsh; in fact, with the exception of the Red-winged Blackbirds they were the most abundant birds in the marsh at that season.

After we had returned from our fishing trip and eaten a hearty breakfast, I set out for a tramp through the woods and swamps back of our camp. I knew that these Canadian forests contained many varieties of interesting trees, most of

which are not found in northern Ohio, and for that reason I maintained as sharp a lookout for the trees as for the birds during my walk.

One of the most interesting varieties of trees that I found was the tamarack, which grew in great abundance all along that portion of the river valley. There was something so pleasing about the delicate pea-green color of the foliage of these trees, and such a picturesqueness in the scraggy shapelessness of their trunks and limbs that I could not help lingering wherever they were to be found. This species has always been a general favorite with tourists and nature students, and it is unfortunate that it is not more generally distributed. Another interesting tree, and one that is still quite plentiful along the banks of the Otonabee, is the white birch, and during that morning walk I counted more than fifty of them. On account of the pure white color of the bark of their trunks and limbs, these trees are very conspicuous objects on the landscape, and a stranger is sure to take notice of them even if he is not at all interested in trees. The bark of these trees is made use of by the canoe makers, although it is not as valuable for their purpose as is the canoe birch.

In the forests proper, the beautiful and symmetrical spruces are the most conspicuous of all the trees, and some of those that I saw that morning were fifty feet high and as round and conical as if they had been turned in a lathe. Red cedars were likewise abundant in the deeper forests. Although these trees are not especially pleasing to the eye, nevertheless they are very valuable for their lumber, which is in great demand at the sawmills for making into shingles. During my walk I also noted the balsam, the pine, the fir, the chestnut, the hemlocks and many others.

From an ornithological point of view, however, my walk was somewhat of a disappointment, for while there were plenty of birds to be seen, they were nearly all of the more familiar species. Among the evergreen trees, Crows and Blue Jays were abundant, their calls making the forests fairly ring

at times; in the tamarack swamps sounded the cheerful songs of Chickadees; from the second growth clearings came the flute-like notes of the Wilson's Thrush; Robins were of common occurrence, thereabouts, many of them being seen skulking along the ground in the depths of the forests. Other species noted were the Cedar Waxwing, the Northern Yellowthroat, the Red-eyed Vireo, the Kingbird, the Flicker, the Red-headed Woodpecker, the Goldfinch and the Sparrow Hawk. I spent about two hours observing these birds and rambling about through the woods, after which I set out for camp.

While on the way back I had the good fortune to meet with one bird that was practically a stranger to me. This bird, which was sitting on a dead branch near my path was about as large as an English Sparrow, and had the cone-shaped bill that is characteristic of the finch family. By dint of keeping a certain dead tree trunk between myself and the bird I succeeded in approaching within twenty feet of it, from which distance I was able to study its plumage without difficulty. Its head and rump were of a bright rosy red color, its belly white, and its breast of a dingy-red hue, streaked and washed with different shades of purple. This data was convincing proof that the stranger was a Purple Finch — a rather uncommon migrant in northeastern Ohio, but a fairly common summer resident near the Otonabee. Once, as I stood watching it, the bird indulged in a low, sweet song that bore some resemblance to that of a Warbling Vireo. After reaching the camp I saw two more of these birds hopping about among the evergreen trees near by, and my companions reported having seen individuals of this species nearly every day since their arrival.

THE BIRDS OF CEDAR POINT AND VICINITY.

BY LYNDS JONES.

More than ordinary interest attaches to the Passerine birds, in this discussion, at least as far as the sand spit of Cedar Point is concerned. Its comparative isolation from the mainland makes it the first step in the translaken flight to Point Pelee for the birds migrating east of Sandusky. Its great length as compared with its width causes a crowding of the birds all along the western half during the great days of migration, such a crowding, in fact, that every species is found in normally impossible places. It is evident that many more birds reach the western half of the sand spit by following the lake shore from farther east than by flying across from the mainland. On the days when crowding is the greatest, most species become so unwary that approach to within a few feet of a bird is easy. No doubt this unwaryness is due to hunger, for the birds are seen to be working with might and main to secure food. So great a host must quickly exhaust the food supply in this restricted area.

Here on the sand spit, on great days of migration, have been found species which are absent from the rest of the area, and species recorded as common which are only occasionally recorded elsewhere. There seems little reasonable doubt that a continuous study of the birds from the beginning of the spring rush to its end would result in the discovery of species which have hitherto eluded observation, and would discover movements as yet hardly suspected. It is probably a more favorable station for such intensive study than any other place within the region because of its narrowness, thus permitting a thorough exploration of every place. It is certainly far less favorable for study of the southward migrations because it probably does not lie in a direct line of flight. The southern point of Pelee and Pelee Island would probably furnish much more favorable stations for observing the southward movement.

Aside from the Cedar Point sand spit the region offers no

peculiar inducements for the Passerine birds in either migration. As already pointed out, the topography is sufficiently diversified and the flora sufficiently rich to be attractive to the nearly two hundred species which are recorded in it each year. Of these two hundred species considerably more than two-thirds are Passerine birds, and of individuals considerably more than three-fourths are Passerine birds.

122. *Tyrannus tyrannus.*—Kingbird.

Only tolerably common over most of the region, occurring on the larger islands where it breeds. One pair breeds regularly near the Lake Laboratory, and about seven other pairs nest eastward on the sand spit. The median date of arrival is April 29; the earliest being April 22; the latest May 11, 1908. My latest fall record is September 17, 1900, and 1906. Nest building begins during the second decade of May. A student once brought me a nest of this bird with an apple grown in from one side so that the nest cavity was nearly obliterated. Evidently the birds had built the nest so that the wall surrounded a small apple. Unoubtedly the young had grown large enough to leave the nest before the apple began to pinch them.

123. *Myiarchus crinitus.*—Crested Flycatcher.

This is a familiar bird over the whole region, nesting in hollow apple trees within two rods of occupied dwellings sometimes, and it is also fairly common in most woods, where its challenging call betrays its presence in the upper parts of the woods. Two or three pairs breed on Cedar Point, necessarily where there are large trees, but it is usually common on several days during the migrations in spring. The median date of arrival is May 1, the earliest being April 25, 1899, and the latest May 13, 1907. Most fall departures occur in the second week of September, the latest being the 14th, 1899.

124. *Sayornis phoebe.*—Phoebe.

Common over the whole region, but less numerous during the breeding season on the sand spit because suitable places for nests are few there except at the summer resort grounds. Hereabouts its local name of Bridge Pewee is entirely appropriate, for nearly every bridge harbors a pair. It is also found all along the stream gorges, where it nests beneath overhanging banks or among the rocks. There seems to be much less nesting about buildings than in many sections of the country, probably because suitable natural nesting places are so abundant. The median date of spring arrival is March 21, the earliest being March 14, 1903, the latest April 6,

1900. My latest fall record is October 19, 1906. Most dates of departure fall early in October. The first individuals noted are in the deeper parts of the stream gorges, where the birds remain, feeding upon early flying insects and buds of trees, particularly the elm and linden. For the most part the birds are silent, singing only on balmy days. They are also solitary during the first week or more of their stay. I have not been able to detect any period of maximum migration after the first week of April. It seems probable that the birds come from the south as a species, and that straggling individuals are not seen weeks before the arrival of the bulk, as is the case with many species.

125. *Nuttallornis borealis*.—Olive-sided Flycatcher.

First recorded for the region May 13, 1907, when upwards of thirty were counted along the middle reaches of the sand spit. This was the day of greatest migration, during which 144 species were actually recorded along the lake shore from Oak Point to the Lake Laboratory. Most of the individuals were feeding in the larger trees in the vicinity of the mouth of Black Channel. They were not singing, and were not at all wary, permitting approach within twenty feet. Four specimens were collected, all of which were exceedingly fat. A visit to the sand spit one week before this date resulted in recording only 76 species, this one not among them. No others were seen during the spjring migrations, but on September 23 one was found on the sand spit near the mouth of Black Channel. On May 18, 1908, five were recorded on the sand spit, but none could be found the following day. One was present in a woods south of Oberlin on May 20 and 21. None were seen in 1909. It is clear that there is no regular migration route through the region, but there probably is from Marblehead across the islands to Point Pelee, and in the reverse direction in autumn. None have been seen on any of the islands, but visits to them have never coincided with the probable movements of these birds across Lake Erie. This species is regularly reported from Wauseon, in the western fourth of the state.

126. *Myiochanes virens*.—Wood Pewee.

Common in all open woodlands and about towns and city parks. Also common on the thinly wooded parts of the Cedar Point sand spit, where it nests. The median date of arrival is May 6, and of departure September 20. The earliest spring arrival is May 2, 1899, and 1905, and the latest fall record is October 18, 1907, when two remained in the writer's orchard for a full month after the bulk had departed. The latest date of nesting is August 15, 1899, when a nest containing three nearly fresh eggs was found. I have never

noticed any material increase of this species in the fall, when the migrations are at their height. It therefore seems likely that the birds from further north move southward by way of the Marblehead route.

127. *Empidonax flaviventris.*—Yellow-bellied Flycatcher.

Hardly more than casual for the Oberlin quadrangle, and usually decidedly uncommon everywhere else. The first one was recorded at Oak Point on May 9, 1904. Other records are May 13, 1907, when upwards of 20 individuals were recorded on the sand spit, September 23, 1907, one on the sand spit, and May 13, 16, and 26, 1908, one each time on the sand spit. None were noted in 1909. A sharp lookout has been kept for this species, and it is not likely that it has been overlooked. It therefore seems certain that its migration route passes west of this region.

128. *Empidonax virescens.*—Acadian Flycatcher.

Common in the deeper woods over the whole region, except Cedar Point and the smaller islands, where there are suitable habitats. The median date of arrival is May 9, the earliest being May 4, 1899. The latest fall record is September 21, 1906, when the bird was singing. Its presence in the deep stream gorges has surprised me, since its natural habitat seems to be rather dense beech woods. Its rather loosely constructed nests are usually placed on the swaying boughs of beech trees, from five to twenty feet up. Often interlacing of branches afford suitable nest sites.

129. *Empidonax traillii alnorum.*—Alder Flycatcher.

There is a colony of some six pairs in each of three swamps at Oak Point, one of perhaps a dozen pairs at the mouth of Vermilion River, one of about ten pairs at Ruggles Beach, between Huron and Vermilion, and a considerable colony at the mouth of Huron River. In the small marshes along the lake shore there are usually to be found one or more pairs of these flycatchers. A pair regularly nests among some water willows which grow on low ground along Plum Creek in the outskirts of Oberlin. I found this flycatcher common at the few suitable places on Middle Bass Island, but have not noted it elsewhere among the islands. It has been found in the borders of the marsh along the sand spit occasionally, but does not nest there regularly, much to my surprise. I have little doubt that it will be found on Pelee Island as a regular breeder. The median date of arrival is May 14, the earliest being May 7, 1902 and 1904. The latest one noted in fall was August 22, 1896, which is probably a good deal too early for the completion of the southward migration. Nests are built much like nests of the Yellow Warbler, but el-

der bushes are more often used than other bushes where they are available. I have also found nests in rose bushes.

130. *Empidonax minimus.*—Least Flycatcher.

Usually common for a month in the spring, but scarce and irregular in the fall. I have never noted more than half a dozen individuals in the fall. The median date of arrival is May 1, the earliest being April 11, 1903. A few individuals usually remain well toward the end of May. Fall records are September 14 and 21, 1907, and 23, 1908. It seems a little strange that the species should be so well distributed over the region during the spring movement, but practically fail to reach it during the fall migration. The fly-line must pass to the westward across Marblehead. While this flycatcher is here it is mostly confined to the brushy border of woods. A few individuals wander into village parks and the shrubbery about houses and vacant lots. On the sand spit it is confined to the brushy fringe which borders the marsh side, rarely venturing over toward the lake. I have one record for August 2, 1907, at the Lake Laboratory.

131. *Otocoris alpestris.*—Horned Lark.

A regular winter visitor to the mainland and sand spit, but usually in small numbers as compared with *praticola*. These birds arrive with the first severe winter weather, and are usually gone north by the opening of spring. One female was captured on April 8, 1895, which seemed to show indications of breeding. Winter flocks of these Larks are almost always mixed in the proportion of 2 of *alpestris* to 7 of *praticola*. Occasionally other field birds are found with them, particularly the Lapland Longspur. It is not difficult to distinguish this form from *praticola* in a good light by the distinctly yellow line over the eye, which, in *praticola*, is grayish white without yellow.

132. *Otocoris alpestris praticola.*—Prairie Horned Lark.

A common resident on the mainland, occurring at other times than the breeding season on the sand spit in its movements to and from the north. None have been noted on any of the islands. These are strictly field birds, preferring pastures to meadows and plowed fields. While feeding in the winter they may be found in any fields which afford food. They make good use of freshly scattered barnyard manure, especially when the land is snow-bound. When such feeding places are scarce they gather in flocks numbering more than 200 individuals. It is not easy to determine whether there is any marked increase during the fall and winter months, because the flocking habit in winter and the scattering of the paired birds dur-

ing the long breeding season make comparisons of individuals difficult. Pairing begins with the first warm days of late winter, and nesting is in progress as early as the last week in March. A second brood is raised in late June or in July. If wintry weather comes after the birds have paired, and continues for some days, they return to the flocking as in winter.

This and the preceding form range together all winter. It is no uncommon thing to see flocks coming from the northward over the lake, always low down near the ice or water, especially in late winter. Many times such flocks have almost tumbled upon the beach to rest, and show "not the slightest fear when approached." After a short rest, without any effort to feed, they start up and resume their southward flight. They may not have crossed the lake, but the evidence points that way. While Lapland Longspurs and Snowflakes are often found with the Larks, I have never seen them in companies which were coming in from the north.

133. *Otocoris alpestris hoyti.*—Hoyt Horned Lark.

My records are February 9, 1903, February 24, 1904, February 22, 1906. The first record was of four individuals in a flock of Prairie Horned Larks; the other two records were of five and four individuals respectively not in company with other birds. Of course the only sure identification is of a bird in the hand, but the distinctly lighter color than either *alpestris* or *praticola*, and the larger size than *praticola* furnish a clue to the individuals of this form when they are flocking with the others. These three records are all for the eastern edge of the Vermillion quadrangle.

134. *Cyanocitta cristata.*—Blue Jay.

Common everywhere except on the smaller islands. More are seen in towns and villages during the winter than in the woods, but the woods are by no means deserted. It has been present at the western end of the sand spit on all visits, and usually individuals are met with along the course of the sand spit eastward. On April and May visits to the Lake Laboratory flocks of Jays have been seen flying from the region of the resort grounds diagonally across the bay to the mainland. I have not been able to find a satisfactory explanation for these flights. A count of the birds in the woods of that area makes it appear that many comprising the flock must have come from outside. It can hardly be a true migration, certainly. In Iowa I have often seen considerable flocks going from one woods in the direction of another woods some two miles distant. It may be no more than a simultaneous change of feeding ground of all the Jays of a small region. I have no evidence of such fluctuations of numbers as would account for spring and fall

migration movements. I doubt if there is any migration in either the Oberlin or Vermillion quadrangle.

135. *Corvus brachyrhynchos.*—Crow.

Common from March to December; present in small numbers all winter in favorable localities. A distinct northward migration occurs with the first sure signs of spring, and a southward migration about the first of November, or with the first really cold weather. An extensive winter roost has been reported to me in a considerble woods south of Lorain, but I have been unable to verify it. Certainly the birds are not sufficiently numerous in winter to account for the numbers reported as resorting to the roost. On three occasions I have been fortunate enough to happen into the midst of great migrations. The first was prior to detailed records before me; the others March 12, 1902, and March 7, 1903. The birds were moving eastward parallel to the lake shore over an area more than half a mile in width and from a few feet above the ground to a height of 300 feet. The migrating stream was almost continuous from 9 a. m., when I arrived at the lake shore, and was still in progress unabated when I left at 4:20 p. m. Most of the birds had reached the shore at some distance west of my point of observation, but some were coming from the south to swell the host. A number of counts of the birds passing a given point were made at widely different times, which resulted in an average of 130 birds passing per minute. There were thus over 50,000 passing during the period of my stay. One might be pardoned for entertaining some curiosity about their destination and why they preferred the long journey around the east end of Lake Erie rather than the short flight directly across, always provided they were Canadians returning to the land of their birth. One pair nested near the Lake Laboratory in the spring of 1907, but I saw no evidence of any nesting the following year. Crows visited the lake beach regularly all summer, where they fed upon the fishes thrown up by the waves. I have never witnessed any other migration of Crows along the point than small flocks flying either westward or eastward, which did not have the appearance of regular migration flights.

It is not stated definitely by Taverner and Swales that on October 14-15, 1906, the Crows were seen flying southward toward the Ohio shore from Point Pelee, but one might so infer. I was on the sand spit all day of the 15th and failed to see any of the Crows coming over the lake, although there were considerable numbers along shore and inland. If any considerable company had arrived anywhere between Huron and Cedar Point I would surely have seen them.

136. *Dolichonyx oryzivorus*.—Bobolink.

Common over the whole mainland region and on the larger islands all summer. Present at Cedar Point only as straggling individuals, except during the migrations. The median date of arrival is April 27, the earliest being April 16, 1904, when it arrived singing. The latest fall record is October 9, 1897. The bulk usually leaves by the middle of September. This bird does not become common before the first week in May. Young birds have been found by June 12. Almost without exception nests are made in meadows. Sometimes the males arrive in considerable flocks, but more often singly or in small companies. The females arrive about a week later than the first males. I have never witnessed any considerable movement of Bobolinks, such as might be called a great migration. None have ever been seen venturing out over the lake as if to cross, nor have any been seen coming from over the lake.

137. *Molothrus ater*.—Cowbird.

Common all summer, but abundant when the young birds begin to flock together. The median date of arrival is March 18, the earliest March 11, 1899. The bulk leave about the first of October, but individuals linger into November, with an occasional one remaining all winter. It is well known that this bird spends the spring and breeding season in small companies of males and females. When the breeding season draws to a close these companies retire to the pastures, where they may be found about the cattle. After the young have begun to flock the old birds seem to join them and roost with them, usually in company with the Grackles. When the Grackle migrations have been delayed considerably I have seen Cowbirds in the great flocks of other "blackbirds."

138. *Xanthocephalus xanthocephalus*.—Yellow-headed Blackbird.

I have nothing to add to the record in "Birds of Ohio," page 218, where it is stated that "There is a specimen in the collection of F. Frey of Sandusky. A flock of six passed over Oberlin just above the treetops, October 9, 1896."

139. *Agelaius phoeniceus*.—Red-winged Blackbird.

Common in all swampy and marshy places over the whole region. It is even abundant in the Sandusky marshes, and in the marshes of Middle Bass and Pelee Islands, where it nests in great numbers. The median date of arrival is March 8, the earliest being February 26, 1906. The bulk have gone south by the third week in October, individuals lingering past the middle of November. I have never noted individuals in mid-winter. Normally this blackbird

migrates in flocks of its own kind, but when the migrations have been held back by a late season they join the huge companies which are made up of several species. The males often arrive in advance of the females, but by no means always. Many early flocks contain both sexes in nearly equal numbers. On each of the late summer visits to the islands this species has been seen migrating southward along the island route, and flocks have been seen coming toward the southern end of Pelee Island from nearly due east, as though they had essayed to cross directly to the Ohio shore from the point of Pelee, but had turned their course to the westward before pasing abreast of the southern extremity of Pelee Island. None have ever been seen crossing elsewhere, and none arriving between Sandusky and Huron. I have never seen flocks make as though intending to cross the lake in the northward migration. Marsh vegetation is still sufficiently abundant, so that these birds seldom build their nests in the marsh bushes, as they do sometimes when natural conditions have changed. I have found eggs which appeared to be nearly fresh, July 15.

140. *Sturnella magna*.—Meadowlark.

Common all summer, present in small numbers all winter wherever there are fields of sufficient extent to harbor a pair. On the Cedar Point sand spit it is only a straggler, more often seen in the winter and early spring than at other times. It feeds in the marsh in the winter, particularly when it is ice covered. I presume it may spend the night there also, at least in heavy weather. Regular migrations occur with the first bird wave, the birds becoming common by the middle of March. The bulk leaves about the end of October, usually just in advance of a hard storm, or during the storm. The winter resident birds begin to sing in late February if the weather becomes spring-like. I have not noticed any increase in numbers with the fall migrations.

141. *Icterus spurius*.—Orchard Oriole.

It is now common over the whole region except the small islands. Prior to 1898 it was decidedly uncommon, but has steadily increased in numbers until now it is in almost as great numbers as the next species. The median date of arrival for the last twelve years is May 1, the earliest being April 29, 1899. I have no reliable fall records. Either the birds depart early or go into hiding. All along the sand spit this Oriole is found nesting in the cottonwood trees eastward, in various trees westward. In 1907 I found many more west of the pleasure grounds than elsewhere. On the mainland they are found nesting in orchards more frequently than else-

where. Several pairs nest in Oberlin. The proportion of full plumaged birds to immature plumaged is about one to three, for the males.

142. *Icterus galbula.*—Baltimore Oriole.

Abundant in villages and parks, common in woodland and orchard elsewhere. It is a common summer bird on the larger islands, but scarce in the region of the Lake Laboratory. During the migrations it is decidedly numerous along the sand spit. The median date of arrival is April 26, the earliest being April 14, 1905. The first arrivals are always bright colored males, which sing very little until others have come. My latest fall record is September 21, 1906. It is not easy to keep track of the Orioles after they begin to molt. I have noticed individual characteristics in the songs, so that it is not difficult to make a fairly accurate count of the birds which inhabit a limited area, like the Oberlin College Campus. Here we found no less than six pairs breeding three successive seasons.

143. *Euphagus carolinus.*—Rusty Blackbird.

Common in wet woods and about the marshes during both migrations. A female was captured at Oak Point February 13, 1897.[1]

[1] The Birds of Ohio. A Revised Catalogue, 1903, p. 134.

This species often flocks with the Red-wing, especially during the early days of migration, but as the season advances it retires to the wet woods or marshes, where its only company is that of occasional Cowbirds. It sings during its entire stay in spring. The median date of spring arrival is March 16, and it has gone north about the tenth of May. It returns about the middle of September and leaves for the south with the first winter storm, usually early in November. It occurs in rather less numbers than any of the other "blackbirds."

144. *Quiscalus quiscalus aeneus.*—Bronzed Grackle.

Abundant in the vicinity of human habitations during the breeding season, seen everywhere on its excursions for food. A few remain all winter in favorable places. The migrations occur with the opening of spring in late February or early March, and the departure of the bulk is coincident with the first winter weather. The summer roosting begins by the first of May and continues as long as the foliage furnishes a cover. Molting begins the last week in June and continues, for the flock, for fully eight weeks. The birds nest in great numbers in cemeteries and in shade trees about dwellings in towns and villages as well as about farm dwellings. Their numbers are becoming so great that they make nuisances of

themselves, especially during the roosting period and when the young are just beginning to fly. None have been found nesting on the sand spit, but great numbers come into the marshes during late summer. At all times of day numbers of these birds may be seen feeding along the beach. Their favorite morsel seems to be the eyes of the fishes which the waves have cast up.

145. *Hesperiphona vespertina.*—Evening Grosbeak.

The only record for the region known to the writer is that recorded in "The Birds of Ohio," page 136, of a specimen secured by Dr. Carl Tuttle at Berlin Heights, January 30, 1890. Its casual occurrence in other places along the lake shore indicates casual visitation to this region.

146. *Pinicola enucleator leucura.*—Pine Grosbeak.

One was found in the Vermillion River gorge January 1, 1902, a flock of twelve visited the outskirts of Oberlin from November 20 to December 4, 1903; two companies of four individuals were recorded in the region of Oak Point on January 5, and a company of four individuals remained just north of the college campus from February 21 to 29, 1904. The character of the winter seems to have little to do with the visitations of this interesting species.

147. *Passer domesticus.*—English Sparrow.

The increasing abundance and aggressiveness of this vermin in feathers forces this much recognition. It has not yet made its way to any part of the sand spit except the summer resort grounds, but elsewhere in the whole region it is menacingly abundant. As yet it goes into the woods to nest but rarely, but it is gradually invading the borders of woods. In several places in the stream gorges it has caused the complete evacuation by the Bank and Rough-winged Swallows by appropriating all available nesting places. Their destructiveness to small grains both while it is standing in the field nearly ripened and while it is in the shock, and to garden vegetables, is more serious than is commonly supposed. Effective means for their destruction would be hailed as a relief.

148. *Carpodacus purpureus.*—Purple Finch.

A regular but seldom common winter visitor. It was common on October 9, 1897, and again on September 24, 1906. It usually occurs in small companies. Fully colored birds are always less numerous than those in the spotted plumage, and they usually occur in about the proportion of one to five. The latest spring record is May 28, 1907, the average falling near the first of May. First fall records are too scattering to be reliable, the earliest are September

7, 1901, and September 14, 1906. In winter these birds are more often found in the stream gorges and among evergreen growth than elsewhere. I have met them in the cedar thickets of the sand spit at all seasons in fall, winter and spring. During the spring they feed pretty largely upon buds of trees.

149. *Loxia curvirostra minor.*—Red Crossbill.

Of decidedly irregular occurrence. It has never been recorded in the middle of the summer, but the record for May 25, 1897, and May 18, 1900, give some reason for the suspicion that it may occasionally breed hereabouts. It has not yet been seen at Cedar Point, but its occurrence there is probably beyond question.

150. *Loxia leucoptera.*—White-winged Crossbill.

A flock of six was seen in a small pine woods north of Elyria on January 4, and two in the same place on January 7, 1902. Three in full and one in immature plumage were found a mile west of Huron on November 5, 1906. These are all of my records.

151. *Acanthis linaria.*—Redpoll.

My personal records follow: December 29, 1903, two near Brownhelm; February 5, 1904, probably the same two birds at the same place; one on February 1, south of Oberlin, two flocks numbering about 20 birds just north of the edge of the college campus in Oberlin from March 11 to 16, 1907, and small flocks ranging along the beach of the sand spit during the winter of 1906-7. Previous to my residence in Ohio this species was reported as being common in the region of Oberlin nearly every winter. The records given above indicate that it has greatly decreased in numbers since.

152. *Astragalinus tristis.*—Goldfinch.

Present all the year, but apparently much more numerous from May to October. I incline to the opinion that there is little or no migration, but that the flocking of the birds in winter, and their habit of living in secluded places in woods, and their spreading out during the warmer part of the year are accountable for the apparent difference in abundance noted. There is a time in late March and during the most of April when it is unusual to record this species unless one knows where to look for them. They are undergoing the spring molt and remain in hiding. During the summer they are one of the most conspicuous and omnipresent of our birds. They nest along the whole length of the sand spit, except the region of the summer resort grounds. I have seen them on all but the small islands. On several steamer trips far out upon the lake a Goldfinch has been sighted flying about in the vicinity for some part of the trip.

153. *Spinus pinus.*—Pine Siskin.

Tolerably common from late September until the third week in May. It is pretty evenly distributed over the whole region visited during this period, and likely visits the islands in winter. I have as often found it feeding in weedy fields as in the woods. It ranges along the lake shore pretty generally, and is usually seen on the sand spit except in summer. The reported breeding of this species in northern Ohio needs verification. This finch is often associated with the Goldfinch in winter.

154. *Plectrophenax nivalis.*—Snowflake.

The earliest fall record is October 29, 1906, which was five weeks before any really wintry weather occurred. These two birds were ranging the beach along the sand spit easterly. The latest spring record is March 16, 1908; also along the sand spit. We can never count on the appearance of this bird on the mainland until winter sets in with snow covering the ground. During the present winter, 1909-10, there have been unusual numbers of Snowflakes, accompanying the almost continuous snowy covering since Christmas day. When they are in considerable numbers they occur in flocks without mixing with other species, unless it is an occasional Lapland Longspur, but when their numbers are few they often flock with the Horned Larks and Longspurs. They are less strictly open field birds than the Larks and Longspurs, sometimes being found perched in trees at the border of woods, or feeding in orchards.

155. *Calcarius lapponicus.*—Lapland Longspur.

regular, but seldom more than few in numbers during the winter. My earliest fall record is October 15, 1906, and latest spring record April 23, 1897. The largest company ever seen was one of upwards of fifty on April 23, 1897. They almost always flock with the Horned Larks, from which they are readily distinguished by their different method of flight when in the air, and by their habit of crouching close to the ground when feeding. I have never seen any individual in perfect spring dress. It has not been seen on the sand spit proper, but it has been found in the fields bordering the marsh on the south and east.

156. *Pooecetes gramineus.*—Vesper Sparrow.

Common over the open parts of the mainland all summer, sometimes common during the spring migrations along the sand spit. None observed breeding anywhere along the sand spit. It was found on Kelley's and Put-in-Bay Islands in summer. It should breed on Pelee Island. The median date of arrival is March 27, the earliest being March 20, 1898. The bulk leaves during the last of

October, individuals sometimes remaining into the first week of November. One was recorded on January 1, 1904, at a spot on the lake shore where a large mass of cinders used for a railroad fill was afire. On subsequent visits the bird was not found. Fresh eggs have been found May 16, and young birds in the nest May 31. This is one of the most characteristic and numerous birds of our fields, where its nests abound.

157. *Passerculus sandwichensis savanna.*—Savanna Sparrow.

A regular migrant in small numbers at both migration seasons. The only time when it has been found in sufficient numbers to be called common was October 21, 1907. In that year it was present on the sand spit from April 15 to 29, and from October 15 to 23. Several individuals were singing during the autumn sojourn. I have never found it on any of the islands, probably because visits to them have not coincided with the migrations of this species. The median date of arrival is April 6, the earliest being March 21, 1903. The birds have gone north by the third week in May. Fall records are too few to make statements of that movement of any value. Except on the sand spit, where they are found anywhere in open spaces, these birds are confined to the grassy fields and meadows, being most numerous along the grassy borders of ditches. They may occasionally be flushed from the midst of wet fields.

158. *Ammodramus savannarum australis.*—Grasshopper Sparrow.

A rather common summer resident, breeding in meadows. The average is about two pairs in a five-acre meadow. It was fairly common on the sand spit among the grassy reaches, but not in the swamps, on April 29, and May 6 to 13, 1907. It breeds in a meadow at Rye Beach. The median date of arrival is April 27, the earliest being April 16, 1906. It sings well toward the end of July, and passes south by the middle of September. There has been no perceptible increase or fluctuation in numbers in sixteen years. The plowing up of meadows results in a shifting of the nesting area to the nearest new meadow. The nest is placed in a slight depression in the ground at the base of a tussock of grass or bunch of weeds. In Iowa many nests were placed beneath the lowest leaves of the bull thistle. While the favorite perch is a weed stem, which barely reaches the top of the grass of the meadow, birds not infrequently perch on a fence post or the topmost wire while they sing.

159. *Passerherbulus henslowi.*—Henslow Sparrow.

The first specimen captured in the region was June 4, 1894, in a meadow three miles north of Oberlin, by Rev. W. L. Dawson and

the writer. It was next recorded during the entire summer of 1896, the first migrant appearing on May 6. None were recorded until April 22, 1907, near Amherst. On April 29 and May 13, 1907, it was found breeding at Rye Beach, where it remained during the summer, being recorded on each visit. It was again recorded on May 11, 1908, near Berlin Heights, and on May 13 at its old breeding field at Rye Beach. The two published records of this sparrow in Ohio which appeared prior to the publication of Mr. Ridgway's monumental work on the Sparrows were overlooked by him, so that in that work he cited no authentic Ohio records. The first published record was in the Auk, XII, 1895, p. 241; the second in The Wilson Bulletin, III, p. 1.

160. *Chondestes grammacus.*—Lark Sparrow.

A fairly regular summer resident of the mainland, but scarce. My records indicate that it arrives late in April and departs southward during the first half of September. It is more often met with in the river bottoms than elsewhere, but it has nested in fields in the environs of Oberlin. I have never found it in the vicinity of the sand spit. It is as much of a field bird as Vesper Sparrow, and sings from a fence or tree perch. This sparrow has been found casually to the eastern border of the state, but this region is evidently near the eastern border of its habitual range in summer.

161. *Zonotrichia leucophrys.*—White-crowned Sparrow.

Always common, sometimes abundant, in the spring migrations, much less numerous in the fall migrations. It is probably the most numerous sparrow on the sand spit during the height of the spring migration, where every thicket is full of singing birds. It was common from October 2 to 9, 1897. The median date of spring arrival is May, the earliest April 22, 1902. The bulk have gone north by the middle of May, the last May 21. Fall arrivals are October 1 to 15. The last depart about October 20. The favorite retreats of this sparrow, while it is with us, are the weedy and brushy fence rows, brush patches, or even brush piles in the borders of woods. It is also found in rather thickly grown orchards. The middle and eastern thirds of the sand spit are ideal retreats in spring.

162. *Zonotrichia albicollis.*—White-throated Sparrow.

Common during both migrations on the sand spit as well as on the mainland. It is distributed over all brushy areas as well as in the woods and in back lots in villages and parks, and therefore is really more numerous than the last species, but on the sand spit it is usually outnumbered by it. The median date of arrival in spring is April 16, April 1, 1899, being the first. One was found in a river

gorge on January 1, 1906. The median date of departure of the bulk is May 12, of the last, May 16, but the individuals tarry until May 21 (1904). The median date of arrival in fall is September 26, of departure, November 3. It is possible that an occasional pair remains to breed, but if so none have ever been found.

163. *Spizella monticola.*—Tree Sparrow.

Our most numerous winter bird. Small to considerable flocks range along the sand spit and out into the frozen marshes all winter. It is usually associated with Juncos and Song Sparrows, and frequently with Cardinals, but also occurs alone. The median date of spring departure of the bulk is April 7, of the last, April 27; of arrival in fall, October 25. Flocks of from a few individuals to at least 300 range over the whole country all winter, visiting the dooryards in town as well as penetrating into the depest woods, and gleaning from open fields. It is a not infrequent visitor to the lunch counter in the heart of Oberlin. This sparrow suffers more from attacks of the Northern Shrike than any other, probably because it is the most numerous. Pigeon Hawks also prey upon it. The constant cheerful twitter of the Tree Sparrows, and their habit of bursting into full song while the snow is falling and the wind blowing in midwinter, make it seem a most welcome visitor when most other birds are absent or silent.

164. *Spizella passerina.*—Chipping Sparrow.

Common about human habitations all summer. It is everywhere in parks and dwellings, and about the premises of country houses, often nesting in the vines which cover a trellis to shade a porch. It also nests in ornamental vines and shrubs which afford a sufficiently dense network of branches or twigs. I have many times noted it nesting in such situations long after the buildings had disappeared and the region deserted by human beings. One such place was clearly an old Indian "kitchen midden." The median date of arrival is April 1, the earliest March 27, 1905. The median date of departure of the bulk is September 24, of the last, October 15. The birds usually become common within a few days after the arrival of the first one. Naturally the sand spit is not a suitable place for the nesting of this species, but it has been found common during the migrations, especially toward and at the west end. Probably a few pairs breed about the summer resort grounds, but the noises there and the confusion of crowds drown its voice and make it timid.

165. *Spizella pusilla.*—Field Sparrow.

Common over the whole region where there are suitable brushy conditions. It breeds on the sand spit, but less commonly than one might expect. Its porper habitat is brushy borders of woods, or, if there is no brush, rank weeds will do as well. Brushy fields are also thickly inhabited. Most nests are placed above the ground, sometimes as high as six feet in a brushy tangle, but sometimes practically on the ground among weed stems and grasses. The median date of arrival is March 18, the earliest March 12, 1898. The median date of departure of the bulk is September 19, the latest being October 23. This Sparrow is seldom imposed upon by the Cowbird, in spite of the relatively exposed situation of the nest—or because of this.

166. *Junco hyemalis.*—Slate-colored Junco.

Abundant during the migrations, and usually common all winter, especially in the stream gorges. It ranges with the Tree Sparrow in the less exposed places of that sparrow's range, but does not often venture out of the woods or brush, except to door yards, in mid-winter. It is a frequent visitor to the lunch counter in winter. The median date of departure of the bulk is April 25, and of the last, April 30, but individuals sometimes tarry to May 20 (1907). The birds return about the first of October, and become common almost immediately. Early fall storms which cover their food often bring about a diminution in numbers. I have found them tucked snugly away in hay stacks, in hay mows, in corn shocks, among the rocks in the gorges, in thickly leaved trees, beneath thick grass, and beneath the snow, where they pass the night.

SOME WINTER BIRDS ABOUT LAKE WIMLICO, FLORIDA.

BY G. CLYDE FISHER.

Having decided to spend a week hunting deer in the vicinity of Lake Wimlico, six others and I proceeded to Apalachicola, an interesting old city situated on the Gulf coast at the mouth of the river of the same name. Here we secured a launch, and on the morning of December 25, 1909, we started, going up the Apalachicola River, which separates what is locally known as West Florida from the rest of the state. This pan-handle, which lies immediately south of Alabama, would naturally be a geographical part of that state. However, it is

a part of Florida. We proceeded northward up the Apalachicola River, a distance of about six miles, to the mouth of Jackson's Old River, into which we turned. The river, as may be supposed, takes its name from General Jackson, and many local traditions are handed down of how he here bearded the Spaniards in their den. Although it is only eight miles long, the river is from one-fourth to one-half mile wide. It simply forms the outlet of Lake Wimlico, connecting it with the Apalachicola River. After proceeding through Jackson's Old River we entered Lake Wimlico, which is one of the most beautiful of the numerous lakes of Florida, many of which are remarkable for their rare beauty.

This lake is located in the southern part of Calhoun County, in a region which is generally known as the St. Jo Country. Owing to the lowness of the land and the consequent wet conditions for a large part of each year, this region is very sparsely settled and has been disturbed by man to a very limited extent. In fact, almost everything exists in its primeval beauty. As will be noted from this brief narrative, the lake lies northwest of Apalachicola, and is less than fifteen miles distant. It is rather long and narrow, being about twelve miles long and from two to six miles wide. It is surrounded by almost interminable cypress swamps, with here and there a small area of "piney" woods, which areas are all well back from the lake.

Besides the Cypress with its graceful festoons of Spanish "Moss," the prevailing trees are Black Gum, Cabbage, Spruce Pine, and Slash Pine. The magnificent Cabbage, Spruce interspersed here and there, some of which are forty feet in height, give the region a tropical appearance. The berries of the Black Gum constitute a very important part of the food of the Florida Black Bear, which is still found in considerable numbers in these almost limitless swamps.

Flowing into the lake are several creeks, or bayous. We proceeded to the mouth of one called Indian Bayou, near the upper end of the lake. While going through the lake it was not difficult to imagine what a birds' paradise this place must be during the nesting season, especially for water-loving and

swamp-loving birds. From the launch, on the way through the lake, I counted fifty-six Osprey's nests in the cypress trees surrounding the lake, but I did not see a single Osprey. Our guide told us that they were down on the Gulf at this time of year. He further informed us that, although the Ospreys build their nests and rear their young around the lake, they go to the Gulf, which is fifteen or twenty miles distant, to fish, and that they bring food for their young from that distance. He thinks they nest up around the lake to avoid the Bald Eagles which stay around the Gulf.

We went up Indian Bayou about five miles, where we found a landing — an open space with a few scattering pines, which was slightly higher than the surrounding country, but only very slightly higher. The lowness and levelness of this whole region may be better realized when we consider the fact that the tides were not only considerable on the lake, having come up the river from Apalachicola Bay, but that at our camp, five miles up Indian Bayou, we had a tide of two or three feet.

We remained in camp here six days, and since hunting deer was the primary object of the trip, bird-study was only incidental. If one does not mind wading in water, this is a great place to hunt. Wild Cats, Otters, Deer, and Black Bears are rather plentiful, and there are still a few Panthers. Wild Turkeys are by no means rare, but we saw none on this trip.

We saw Florida Blue Jays about Apalachicola, but I was surprised to find them absent around Lake Wimlico. Not one was seen during the six days, but their absence is probably explained by the absence of oak trees and the consequent absence of acorns.

Pied-billed Grebes were much rarer than I expected to find them, since they are so common in West Florida during the winter months.

The rarest privilege of the trip from the standpoint of a bird student was our experience with the Sandhill Cranes. Every morning at daybreak we could hear their "sonorous croakings."

A few species of birds were observed about Apalachicola, which we did not see up about Lake Wimlico, such as Wilson's Snipe, Brown Pelican, Ground Dove, Pipit, Fish Crow, Red-winged Blackbird, and Boat-tailed Grackle, but they are not included in the list, which is undoubtedly far from complete, as it contains only those birds that we were fortunate enough to observe from December 25 to 31, 1909.

Osprey's (*Pandion haliactus carolinensis*) Nest on Indian Bayou, near Lake Wimlico, Florida. (Photo by G. Clyde Fisher, Dec. 26, 1909.)

(1) *Colymbus auritus.*—Horned Grebe. One seen.

(2) *Podilymbus podiceps.*—Pied-billed Grebe. Two seen on Indian Bayou.

(3) *Larus argentatus.*—Herring Gull. Several seen on the way up the river.

(4) *Aix sponsa.*—Wood Duck. Not rare.

(5) *Aythia affinis.*—Lesser Scaup Duck. A few flocks on the lake. Other ducks were seen, but no others were positively identified.

(6) *Ardea herodias.*—Great Blue Heron. A few seen.

(7) *Grus americana.*—Sandhill Crane. Comon. Heard every morning at daybreak and often during the day. From two to six often seen flying about. An adult female taken on December 27, since mounted, and now in the Palmer College collection. The trachea of this specimen was dissected out, and found to contain a peculiar and elaborate curve mostly encased in the breast-bone.

(8) *Fulica americana.*—Coot. Two seen.

(9) *Ægialitis vocifera.*—Killdeer. Common.

(10) *Zenaidura macroura.*—Mourning Dove. Not rare.

(11) *Cathartes aura septentrionalis.*—Turkey Vulture. Common.

(12) *Catharista atrata.*—Black Vulture. A few seen.

(13) *Circus hudsonius.*—Marsh Hawk. Rather common.

(14) *Buteo lineatus.*—Red-shouldered Hawk. Common.

(15) *Falco sparverius.*—Sparrow Hawk. A few seen.

(16) *Strix varia alleni.*—Florida Barred Owl. Frequently heard in the swamps at night.

(17) *Ceryle alcyon.*—Belted Kingfiisher. Several seen.

(18) *Dryobates pubescens.*—Southern Downy Woodpecker. A few seen.

(19) *Dryobates borealis.*—Red-cockaded Woodpecker. A few seen in the patches of pine woods.

(20) *Sphyrapicus varius.*—Yellow-bellied Sapsucker. Rather common.

(21) *Phlœotomus pileatus.*—Pileated Woodpecker. Rather common.

(22) *Centurus carolinus.*—Red-bellied Woodpecker. Very common.

(23) *Colaptes auratus.*—Flicker. A few seen.

(24) *Sayornis phœbe.*—Phœbe. Common.

(25) *Corvus brachyrhynchos pascuus.*—Florida Crow. Common. A specimen taken and sent to Frank M. Chapman,

who pronounced it *pascuus* with the comment "approaching *brachyrhynchos*."

(26) *Sturnella magna*.—Meadowlark. Common. May have been the Florida Meadowlark, *S. m. argutula*.

(27) *Astragalinus tristis*.—Goldfinch. Not rare.

(28) *Coturniculus savannarum australis*.—Grasshopper Sparrow. Common. May have been the Florida sub-species, *C. s. floridanus*.

(29) *Ammodramus henslowi*.—Henslow Sparrow. Common.

(30) *Melospiza cinerea melodia*.—Song Sparrow. Two seen.

(31) *Pipilo erythrophthalmus*.—Towhee. Several heard. May have been the White-eyed Towhee, *P. e. alleni*.

(32) *Cardinalis cardinalis*.—Cardinal. Several seen. May have been the Florida Cardinal, *C. c. floridanus*.

(33) *Iridoprocne bicolor*.—Tree Swallow. One seen.

(34) *Mniotilta varia*.—Black and White Warbler. Several seen.

(35) *Dendroica coronata*.—Myrtle Warbler. Not rare.

(36) *Dendroica vigorsii*.—Pine Warbler. Common.

(37) *Dendroica palmarum*.—Palm Warbler. Common.

(38) *Dendroica palmarum hypochrysea*.—Yellow Palm Warbler. Several seen.

(39) *Geothlypis trichas*.—Yellow-throat. A few seen. The sub-species not determined.

(40) *Mimus polyglottos*.—Mockingbird. Several seen.

(41) *Dumetella carolinensis*.—Catbird. Common.

(42) *Toxostoma rufum*.—Brown Thrasher. A few seen.

(43) *Thryothorus ludovicianus*.—Carolina Wren. Common.

(44) *Sitta pusilla*.—Brown-headed Nuthatch. A few seen.

(45) *Penthestes carolinensis*.—Carolina Chickadee. Common.

(46) *Regulus calendula*.—Ruby-crowned Kinglet. Very common.

(47) *Hylocichla guttata pallasii.*—Hermit Thrush. Rather common.

(48) *Planesticus migratorius.*—Robin. Very common.

(49) *Sialia sialis.*—Bluebird. Common.

THE STATUS OF THE PASSENGER PIGEON (*Ectopistes migratorius*) IN EASTERN PENNSYLVANIA.

"In view of the fact that every good bird student will be looking out for Passenger Pigeons this summer, I write to give you a little information which, however, may not be much good, but nevertheless will interest you. At Mt. Gretna, Lebanon County, Pa., where our military company often goes on their summer camp, Mr. Vernon Wallace, of this town, saw a pair of Passenger Pigeons in the trees about the camp, between May 1 and 15 (favorable dates). Birds were rather tame at first, but soon became wild, and, after three days, did not return from the wooded mountain side (nearby), to where they invariably flew when disturbed. Mr. Wallace is an experienced hunter and could not be mistaken. I submit this bit of information because the location is not far from your home. News twelve years old may be stale, but nevertheless it may be a case of 'staler the better.'" So writes Mr. J. Warren Jacobs in a recent note, and recalls to my mind an instance of a single egg taken from a frail nest in a cedar tree, near Columbia, Lancaster County, in 1889, by Mr. Lionel F. Bowers — my companion in many a boyish collecting trip. I examined the egg, listened to his description of the bird, and had no doubt of its identity.

On the other hand, Mr. E. W. Campbell's recent record in Luzerne County, of a "resident pair, reared young" (*Oologist*, Vol. xxiii, 1906, p. 108), is open to question. He also reports the Least Sandpiper "pair with young." Mr. William B. Crispin's set of two eggs "collected in Potter County for F. T. Pember by A. Lyon, May 3, 1878"; (*Oologist*, xxiv, 1907, p. 155), are probably the eggs of some variety of the do-

mestic bird. According to the late Major Charles E. Bendire, and others, Pember's localities were taken at random, his collectors fictitious, his data in his own handwriting and creations of his own mind.

It is a popular opinion of the hunters of Monroe County, that the vast flocks were blown out to sea and perished. The hunters were accustomed to visit the nesting places at night and kill the birds with clubs and poles; the breasts were removed, smoked and strung up for future consumption! Of course this would have no effect upon its abundance? In Chester County, the bird was netted with the aid of captives. I have heard from good authority of one netter who stopped marketing only when it no longer paid, the price having fell to *three cents a dozen*. The collection of the late Mr. J. W. Sharp, of Berwyn, contains a single mounted specimen, unfortunately without data, but doubtless shot in the vicinity. Probably the last birds shot in the neighborhood were secured by Dr. H. R. Wharton, in a wood near Strafford, 1878.

I copy from my Journal, under the date of April 17, 1901: "Father remarked to-day at noon that he had seen something he had not observed for a good many years — a flock of Wild Pigeons, fifteen altogether. He knew them from Doves, being larger, darker and more robust. He said there was no mistake, he had shot and handled many of them in days gone by." I referred the matter to Mr. W. J. Hoxie, another old-timer. He replied: "In regard to the Wild Pigeon I would certainly say 'good,' for the dark underparts alone will distinguish the flying birds from the Doves. There are points of movement and general modeling not at all easy to describe."

It is barely possible that the species breeds somewhere in eastern Pennsylvania. If so, may it be delivered from its friends! The only practical way of protecting the bird, if it be not extinct, is to include the Mourning Dove in a general protective law; for not one person in a hundred can differentiate the two species. FRANK L. BURNS.

THE WILSON BULLETIN

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EDITORIAL.

It has been necessary to defer the third installment of the paper on the Falcones, and also to defer to the June number the index to the last volume. The editor greatly regrets this necessity.

Readers will be interested to know that the September number will contain the paper read at the last A. O. U. meeting, entitled, "At the Sign of the Northern Flicker," which Dr. Merriam spoke of as one of the most notable papers on life histories which has appeared. It will supplement the important work of our President, "A Monograph of the Flicker."

This is the time to begin to plan for a systematic study of the migrations and whatever influences them. Plan for certain whole days in the field, not to break the record but to learn more about the bird movements in your region. If you are so fortunate as to be associated with other bird students in your immediate region, form some sort of plan whereby each one may keep careful watch of a given region, each day if possible, and compare notes frequently. By such means it is possible to discover "fly lines," or routes which are preferred by certain species or by all species.

Make daily records so that definite information can be had of fluctuations and their possible causes. Having a definite point in view in bird observation does not make it less interesting but more so.

The readers will notice some changes in the make up of THE BULLETIN, beginning with this twenty-second volume. One of the things which we as students of birds need is closer touch with what each is doing. Therefore a department devoted to mention of what members and readers and students of birds generally are doing, have done, or are purposing doing has been opened, and will be contributed to by as many persons as it is possible to secure notices from. The editor cannot be expected to cover this whole field. It is also intended to renew the department of reviews of literature, and to bring in as associates in this department men and women whose work lies within the region covered by any local list or catalogue which may be published, and get those more familiar with any subject connected with bird study to review papers or books dealing with some special subject. Every reader is urged to send reviews of printed articles, pamphlets, and books whose contents cover the region in which his work is done, or subjects in which he is specially interested. By this means a great saving of time and expense could be effected to nearly every reader by acquainting him with the contents of such publications in a brief review. Otherwise it becomes necessary to purchase and read everything which appears relating to birds in general in order to get the little needed which relates to his special field.

Everybody knows that we need a great many more facts before we can learn why certain birds move southward in some winters and not in others, and why certain species suddenly appear in great numbers where they are almost or wholly unknown at other times. It does not seem to us impossible to gain possession of such facts if our plan of coöperation can be worked out in any fulness. Mr. P. A. Taverner, 55 Elmhurst Avenue, Highland Park, Mich., has expressed a willingness to undertake an investigation of the causes which produced the southward migrations of usually more northern birds the past winter. The editor bespeaks for him the interest and coöperation of everybody in getting at the facts. Send to him all the data you have gathered during the winter relating to all the birds which you have recorded, as well as mention of the absence of any species which you usually find, also stating what you can about the food supply in the way of seeds, nuts, berries, fruit, mice and other small mammals, giving also the condition of the weather. Your effort will be more than repaid by the value which the final report will bring to you.

One side of bird study has been far too generally neglected, a side which is second to none in importance for an understanding of bird life. That is the ecological side. Most local lists are so general in their statements regarding the occurrence of the individual species in the region under discussion that one gains very little information concerning them other than their relative abundance in the whole region. As an instance of what is meant, this is said of the Red-tailed Hawk in a recent local list of more than usual pretensions. "Common resident species." No other comment is given. One might readily infer that the region was wholly wooded and that the bird was evenly distributed over it. We happen to know that the topographical conditions are extremely variable, with scattered woods, in only a few of which this hawk would be likely to breed. Another short sentence would give information of value. We urge upon those who are contemplating compiling local lists to study the habits of the birds with a view of saying something unusual about them — unusual, viewed from the standpoint of the average present day list. It is not enough to say that a species is found — what is its place in the economy of the region. This does not require unusual ability and command of language; it only requires attention. If there has been a change in the topography of the region, resulting in a change or shifting of the life of the region, the facts should be stated. It is only by such means that we can learn what changes and influences are working upon our bird life and also upon human interests.

[From Forest and Stream, January 22, 1910.]

TO SAVE THE PASSENGER PIGEON.—It is gratifying to know that a last effort is being made to find and save from final extinction existing individuals of the Passenger Pigeon. The history of this effort is explained in the letter from Dr. C. F. Hodge, printed elsewhere in this issue of Forest and Stream.

The following memorandum was read at the meeting of the American Ornithologists' Union, December 9, 1909:

"Through the interest and generosity of Colonel Anthony R. Kuser, I am authorized to offer the following award:

"Three hundred dollars ($300.00) for first information of a nesting pair of wild Passenger Pigeons (*Ectopistes migratoria*) undisturbed.

"Before this award will be paid, such information, exclusive and confidential, must be furnished as will enable a committee of expert ornithologists to visit the nest and confirm the finding. If the nest and parent birds are found undisturbed, the award will be promptly paid. (Signed) C. WILLIAM BEEBE,

"New York Zoological Park, New York City.

"Furthermore, Colonel Kuser withdraws his former offer of $100 for a freshly killed Passenger Pigeon. He does this on account of

the great danger of complete extinction of the species.

"Until January 1, 1911, during Mr. Beebe's absence from America, address all correspondence on the subject to C. F. Hodge, Clark University, Worcester, Mass., who will arrange for confirming party and payment of the award, if a nesting colony is found."

This action is, in part, a result of a paper presented to the Union by Mr. Hodge on "The Present Status of the Passenger Pigeon Problem." In this paper he took the position that as long as there is life there is hope — as long as there is any possibility of stragglers of this valuable bird existing on the continent we ought to do all in our power to save them. He said that he would not kill a specimen for $1,000 even to prove that he had seen one, and wished that every one else felt as he does. All offers for skins or dead birds ought to be withdrawn, because at the present crisis these might result in killing the last pair.

At the close of the session Colonel Kuser said to Dr. Hodge that he wished to withdraw his offer for a freshly killed passenger pigeon. Dr. Hodge said that he did not expect everyone to agree with him, but Colonel Kuser replied that he also felt that he would not have one of the birds killed for $1,000. "Well, then," replied Dr. Hodge, "why not let your offer stand for the location of a live specimen?" Colonel Kuser said: "I would gladly give $200 for that."

Some discussion as to how the award should be announced followed. It hardly seemed worth while to offer an award for the sight of a bird that might be lost or dead the next day. It was clear that the important thing is to arouse universal interest in the matter and to take some action which may lead to saving the species from extermination. Finally Dr. Hodge said in effect: "What we want is to locate a breeding colony. Why do you not offer the award of $200 for an undisturbed nest? Then the birds will be there long enough to make identification absolutely sure; we shall know that they are actually breeding, and around such a find we can organize adequate protective measures." "I would give $300 for that," exclaimed Colonel Kuser, and so the matter was left for Messrs. Beebe and Hodge to draw up the announcement.

It seems now with Colonel Kuser's generous offer for a beginning, that an adequate search of the American continent should be set on foot, and if any of the birds are found breeding we ought to quickly effect the organization of a Passenger Pigeon restoration club with membership distributed throughout the United States and Canada. This club could then take up the details of protective work. In connection with the State Game Commissions and sportsmen's clubs it could obtain adequate State legislation and warden service, so that for a term of years the birds may be permitted to

feed and breed in absolute safety and be accorded the freedom of the continent. The organization of the people of a continent around such an interest is in itself an inspiring thing.

This plan should be effective as well in discovering existing Passenger Pigeons as in protecting them when discovered.

Since the above was written, there have been other offers of rewards for undisturbed nests of Passenger Pigeons, for the matter has been received with gratifying interest — an interest which ought to grow. Let us then have more awards and without delay. There should be enough to cover the whole continent and to arouse an interest everywhere. If no nests are found it will cost no one anything; if nesting colonies are found and protected it will be worth a great deal.

Here is the list of the offers of awards up to January 19, 1910:

Col. Anthony R. Kuser, for first nest or nesting colony on North American continent, confirmed $300
Wm. B. Mershon, for first nest for Michigan 100
Edw. Avis, for first nest for Connecticut 100
Messrs. Deane and Whitman, first nest for Illinois 100
John E. Thayer, five awards of $100 each for the five most likely States or Canadian provinces from which no local offers have been secured by April 15 500
County Awards: Allen A. Miller, for first nest found in Worcester County, Mass. 20

NEW HAVEN, CONN., 10 February, 1910.

On December 8, 1909, there was organized in New York City the American Bird Banding Association, the object of which is "the banding of wild birds and the recording of accurate data on their movements." The formation of this society was the outgrowth of a movement which was started in 1908 by a committee of the New Haven Bird Club, having in mind the study of the movements and migrations of wild birds by means of metal bands, which should be attached to their legs. These bands bear an address and a serial number, the inscription reading "Notify the Auk, New York." When a bird is banded a record is made of the number of the band, and the species of bird on which it is used, as well as the date and the place of banding. Should this bird ever fall into anyone's hands, it is hoped that as a result of the inscription on the band, a notification of the finding will be sent to "The Auk," together with a record of the number. In this way accurate data may be obtained of the movements of *individual* birds, a thing which is not possible by the ordinary methods of studying migration. The bands are distributed to interested persons throughout the country, who use them as opportunity offers, this being principally, of course, upon young birds which have not yet left their nest.

This method of studying migration has now been employed in a number of European countries for several years, and noteworthy results have been obtained, such as the capture in South Africa of Storks which were banded in Southern Europe.

An account of the beginning of the work in this country has already been published in "The Auk" (Vol. 26, No. 2, April, 1909, pp. 137-143). Since that time the work has been much extended and during the past season most encouraging results have been obtained. (It is expected that an account of these will appear in the April "Auk" of this year.) It was a result of the extension of the work, which had assumed a national character, that a definite organization was this winter formed for carrying it on. The committee in charge has heretofore depended upon voluntary contributions to defray expenses; it is hoped that now enough interested persons will become members so that their dues of one dollar per year will supply the needed funds. We therefore make this appeal to all persons who are interested in birds, and especially in that great mystery of bird-life — migration — to aid in the solution of its problems by joining this Association. Members will receive free a copy of the annual report of the Executive Committee, and such other literature as may be issued, including a copy of the forthcoming report for the season of 1909. (Since members of the American Ornithologists' Union will get this report in the "Auk," in order that the expenses of the Association may be kept down, and the funds applied to the banding operations, separates will not be sent to such persons unless especially requested.)

For the benefit of any who may fear that the prosecution of this work may be detrimental to bird-life, it should be stated that the Association is thoroughly in sympathy with the conservative efforts of the Audubon Societies in this country. The shooting of birds for the recovery of bands is in no way a part of the scheme. It is desired to have banding done only by reliable persons, and should it be found that the banding of any species is doing harm, either from the disturbing of the nestlings, or from other causes, such work on that species will be discountenanced. As a guaranty of good faith it may be mentioned that the present membership includes not only many of the foremost members of the Amer. Ornithologists' Union but also leaders of the Audubon movement in America.

Applications for membership and remittances of dues should be sent to the Secretary-Treasurer, Mr. C. J. Pennock, Kennett Square, Pa. Persons interested in the banding and caring to assist in this part of the work, should address Dr. Leon J. Cole, Pea-

body Museum, New Haven, Conn. (After April 1, 1910: College of Agriculture, University of Wisconsin, Madison, Wis.)

LEON J. COLE, *President and Chairman of the Executive Committee.*
Peabody Museum, New Haven, Conn.
C. J. PENNOCK, *Secretary-Treasurer,*
Kennett Square, Pa.
LOUIS B. BISHOP,
356 Orange Street, New Haven, Conn.
GLOVER M. ALLEN,
16 Louisburg Square, Boston, Mass.
THOS. S. ROBERTS,
1603 Fourth Ave. S., Minneapolis, Minn.
EXECUTIVE COMMITTEE.

FIELD NOTES.

ADDITIONAL VERNACULAR NAMES OF THE FLICKER (*Colaptes auratus*).—In Barton's Fragments of Natural History of Pennsylvania, published in 1799, and now exceedingly rare, I find the following: "I am informed that this bird is known in Maryland by the name of 'Dishwasher'; also given the name of Flecker."

Berwyn, Pa. FRANK L. BURNS.

HORNED LARK AND BOHEMIAN WAXWING IN MIDDLE WESTERN OHIO.—On December 28, in very cold weather, I met a flock of six Horned Larks in Shelby County, O. The birds were feeding on dung in the middle of a road and allowed close approach. This is my first record of *Otocorys alpestris* proper in this region. On January 18, in a severe windstorm, I was surprised by a flock of some twenty odd Bohemian Waxwing on the street on which I live about one hundred feet away from the house in some cedar trees and maple trees, where they, however, only rested for a few minutes. On January 22, in a howling blizzard, I saw presumably the same flock out at a cemetery, a mile from town, while I was conducting a funeral, and a neater looking flock of birds I never saw. They were absolutely unsuspicious, apparently not knowing what kind of a creature a man was.

New Bremen, O. W. F. HENNINGER.

MIDDLE WESTERN OHIO NOTES.—DOUBLE-CRESTED CORMORANT.—(*Phalacrocorax auritus.* Lesson).—An adult female taken on the Pasco Pond near Sidney, Ohio, September 28, 1909.

BLACK DUCK (*Anas rubripes,* Brewster).—An adult male, taken on the Loramie Reservoir, Shelby County, Ohio, October 12, 1909.

RED-TAILED HAWK (*Buteo borealis*, Gmelin).—An adult male and an adult female taken near the Loramie Reservoir, Shelby County, Ohio, November 25, 1909.

SHORT-EARED OWL (*Asio flammeus*, Pontoppidan).—An adult female taken near Jackson Center, Ohio, December 4, 1909. An immature male taken near Sidney, Ohio, December 4, 1909. An adult female taken near the Loramie Reservoir, November 15, 1909.

BARRED OWL (*Strix varia*, Barton).—An adult female taken near Maplewood, Ohio, December 6, 1909. Stomach contained a bat.

The above data were collected by James W. Stuber, Taxidermist, Sidney, Ohio. G. CLYDE FISHER.

AN UNUSUAL FLIGHT OF THE LOON (*Gavia immer*) IN SOUTH-EASTERN PENNSYLVANIA.—In the Wilson Bulletin for December, 1908, Mr. Frank L. Burns records the capture of two Loons near Berwyn, Chester County, Pa., on November 14, 1908. The birds, it seems, had become bewildered in an early snow storm and had taken refuge in a small pond, where they met their fate.

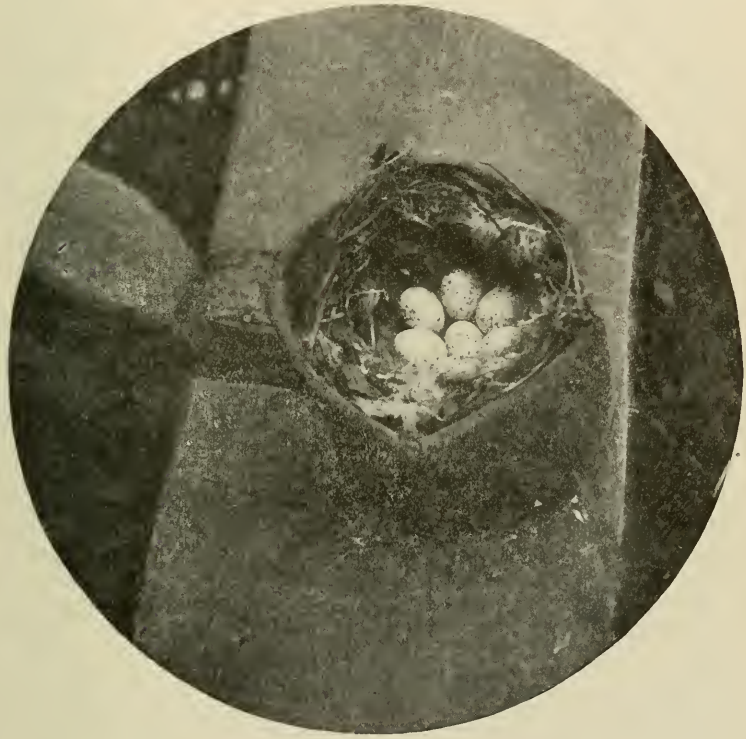
On November 25, 1909, a similar catastrophe occurred in the same region, but of so much greater extent that some note of it seems warranted. The following records have come to my notice; twelve birds in all from Delaware and Chester Counties. Two Loons were shot and two others seen on two small ponds about a mile south of Wayne, Delaware County, Pa. I shot one if these and saw the other which had been killed by a farmer. Mr. Leonard S. Pearson informs me that three more Loons were shot that day on a group of ponds just north of the town. Two Loons were brought to the Philadelphia Academy of Natural Sciences shot at Paoli, Chester County, Pa. One of them is now in the collection of the Academy. Mr. Thomas H. Jackson reports the taking of two of these birds at Lenape, Chester County, Pa., and Mr. George S. Morris tells me that one was seen on a pond near Westtown, Chester County, Pa., for nearly two weeks in the latter part of November.

The storm which overtook this flight was of precisely the same nature as that which overtook the birds the previous year. On November 22, 1909, the wind was from the south with a velocity of twenty-six miles an hour at 7:50 p. m. The following day rain set in at 10 a. m., continuing with one short interruption during the rest of the day. At 1:55 p. m. the wind shifted to the northeast, reaching a velocity of thirty-four miles. On November 24 the rain began again at 9:30 a. m., but turned to sleet and snow shortly after midday and continued until daybreak of November 25. During the 24th the velocity of the wind varied from twenty-seven to forty miles an hour, the direction being north-east.

The occurrence of this storm immediately before Thanksgiving day probably accounts for the large number of birds taken as local gunners were out in force during the holiday.

February 9, 1910. ALFRED C. REDFIELD, *Wayne, Pa.*

NOTE ON THE NESTING OF BEWICK'S WREN.—In Dawson's Birds of Ohio, there is a photo of mine showing the nest and eight eggs of Bewick's Wren, built in an old coffee cup. This picture was taken on May 13, 1901, in Ross County, Ohio. The accompanying photo-



graph of nest and seven eggs of Bewick's Wren was built by the same pair of birds at the same place on April 28, 1902. Bewick's Wren in southern Ohio has two broods, and often three, the first having from seven to eleven eggs, the second generally from three to six. Nesting falls in late April and early May and again in June, and even July. In middle western Ohio it is a rather rare summer resident, and in northern Ohio a straggler only.

New Bremen, O. W. F. HENNINGER.

NOTES FROM ILLINOIS.—The first Bluebird call was heard March 4th, inaugurating spring, as it seems, and a most pleasing sound to hear after our long, cold winter, the hardest for nearly thirty years, so it is said, barring possibly, the season of 1892-'93.

Mr. Isaac E. Hess, of Philo, Champaign county, reports the first Robin February 14th.

Miss Elizabeth Eldridge writes of seeing a Flicker about their place, near Plainfield, Will county, 'till the very last of December, notwithstanding the arctic spell of weather which reigned throughout the month.

We naturally would expect some far northern visitors this winter, and, for the first time in many years, the Snowy Owl has been reported as spending a portion of the season here in DuPage county, one having been seen in Addison township, December 29th, by Mr. G. A. Abbott, of Chicago, and later, for the first two weeks of February another appeared quite frequently on the outskirts of this village. Unfortunately it was not the writer's privilege, owing to illness, to witness this visitation.

In some portions of the state Quail are said to have suffered.

Glen Ellyn, Ill. BENJ. T. GAULT.

PERSONAL.

OUR MEMBERS HERE AND THERE.

Our president, Frank L. Burns, is very busy with his monograph of the Broad-winged Hawk, which promises to eclipse his former monographs of the Crow and the Flicker.

Mr. Isaac E. Hess of Philo, Ill., whose recent article in the "Auk," "Breeding Birds of Central Illinois," has caused so much favorable comment, has joined our ranks. We bid him a hearty welcome in our midst.

Send your Field Notes to the Wilson Bulletin!

The Farmers' Bulletin 383 of the U. S. Dept. of Agricult. entitled "How to destroy English Sparrows," was prepared by our fellow-member, Dr. Ned Dearborn. It is a good piece of work, practical and useful to the farmers. The only fault — not Mr. Dearborn's to be sure — is the poor picture, but we have never seen a good picture in any of the Government's publications to the farmers.

Rev. Gustave Eifrig has moved to Addison, Ill., where he now holds a professorship. We hope to have an article on birds from his pen ere long.

Don't hide your Field Notes in the pigeon holes of your desk; send them to the Wilson Bulletin!

Our member, the Hon. R. M. Barnes, of Lacon county, Ill., the able editor of the "Oologist," enjoyed a California vacation trip to

a family reunion. We hope he has rested sufficiently from his editorial duties to take them up again with renewed vigor.

Mr. George L. Fordyce of Youngstown, O., reports the White-winged Scoter and Whistling Swan, quite rare as Ohio Birds among his list of 1909 spring migrants. Mr. Fordyce always finds a few hours away from business to look up the rara avis.

Any records of new winter birds in your region? Send them to the Wilson Bulletin.

Our Treasurer, Rev. W. F. Henninger, together with Professor James S. Hine of the Ohio State University, is working up the "Mammals of Ohio" under the auspices of the Ohio Academy of Natural Science, to be published similar to Jones' Catalogue of the Birds of Ohio. We hope our treasurer will not forget the birds altogether.

Norman A. Wood, our distinguished member, the discoverer of the breeding haunts of Kirtland's Warbler, reports a splendid ornithological time in the fall of 1909 at Point Pelee, together with some of our Michigan and Ontario men. The congenial taxidermist of the U. of M. museum is always very much alive, careful and painstaking in all his work.

How is THIS spring's migration of birds in your field of work? Publish the results in the Wilson Bulletin!

After the recent death of Mr. Chas. K. Worthen, of Warsaw, Ill., the well known ornithologist and dealer in mammal and bird skins and eggs, the bird-skins, 7,000 in number, were bought up by two members of our club, Dr. Jonathan L. Dwight, Jr., and James A. Fleming. No doubt but that science will profit by this purchase.

Did you know that of the nine General Articles in the January, 1910, "Auk" six were written by members of the Wilson Club? And that of the thirty-four General Notes, ten were sent in by our members? This shows the standing and work of our Club.

Did you get any good photos of birds, nests and eggs in 1909? If so, why not publish them in the Wilson Bulletin? W. F. H.

NOTES AND NEWS.

Of his experiences among the coast islands of the lower Alaskan Peninsula, during the spring, summer and early fall of 1909, in the expedition so successfully conducted by himself, with the help of one camp assistant, in the interests of the Museum of Vertebrate Zoology of the University of California, Harry S. Swarth has this to say, in part: Leaving Juneau on the morning of April 10, in a 28-foot launch of 7-foot beam, a long list of islands was visited in addition to several points of interest on the mainland. And, although working under the most unfavorable conditions, the net results were counted good, both in the number and quality of

specimens taken, several new species of mammals, in all probability, being represented in the lot, as well as the addition of several species of birds new to the Alaskan fauna.

In speaking of the weather conditions encountered on this trip, the following is taken from his letter of October 17th:

"It's a nasty country to work in, and if you are looking for a pleasure trip I would recommend almost any other place in the country. In the last three months there were, I believe, just six days in which it did not rain. In May and June we had a few stretches of nice weather, a week or so at a time, which was fortunate, else we would not have been able to reach many of the outlying islands. It was cold and raw about all the time, and I had to have a fire in the tent whenever I skinned specimens, partly for warmth and partly to keep things dry. Personally, I infinitely prefer the desert! I would not have missed the experience for a good deal; but I am not sorry that it is over, and have no desire to go back. They say the summer was unusually cold and rainy, which may or may not be the fact, but at any rate it had one advantage, in that we were not bothered at all by mosquitoes and flies, except in one or two places." B. T. G.

NAMES PROPOSED FOR MEMBERSHIP.

The following nominations for membership in the Wilson Ornithological Club have been approved by the Executive Committee. Members will therefore confer a favor in notifying the Secretary at once if objections to any of these are offered. In the absence of objection candidates are considered duly elected according to our constitution.

FOR ACTIVE MEMBERSHIP.

Edward E. Armstrong, 2148 North Sawyer Ave., Chicago, Ill.
Miss Elizabeth Eldridge, Plainfield, Will County, Ill.
W. Elmer Ekblaw, 505 E. Green Street, Champaign, Ill.
Miss Laura Gano, Earlham Place, Richmond, Ind.
Isaac E. Hess, Philo, Ill.
J. Watts Marcus, Jr., Wallingford, Penn.
Harry S. Swarth, Museum Vertebrate Zoology, Berkeley, Calif.

FOR ASSOCIATE MEMBERSHIP.

Arthur W. Moline, 7622 Ingleside Avenue, Chicago, Ill.

JOHN FARWELL FERRY.

The sudden and untimely death at St. Luke's Hospital, Chicago, February 11, 1910, from acute pneumonia, of our fellow member, John Farwell Ferry, came as a great surprise and shock to his many friends in and about the city and throughout the country at large.

Born October 12, 1877, Mr. Ferry developed early in life a fondness for natural history pursuits and, before entering the preparatory school at Andover, Mass., had gathered together a collection of North American birds that would have done credit to a much older person.

Graduating with the engineering class of the Sheffield School of Yale in 1901, he later became Secretary of the Sheffield Branch of the Y. M. C. A. at New Haven, Conn. In 1902 he took up the mercantile calling and acted as a traveling salesman for two years. During the summer of 1905 he received an appointment with the Biological Survey and collected that season in California. February 1, 1906, he joined the staff of the Field Museum of Chicago, under Prof. Chas. B. Cory, curator of the Department of Zoology, which institution he served faithfully and well up to the time of his death.

His museum experience being the longest was perhaps most prolific of results, several trips of some duration being planned and executed by him during that time, chief among which may be mentioned an expedition to Central America and northern South America during the winter of 1907-'08.

This was followed the suceeding year by another to the islands of the Caribbean Sea, which proved unusually successful, adding several novelties new to science among the birds, a honey creeper, *Coereba ferryi*, being named by Prof. Cory in honor of the collector.

The readers of the Bulletin will remember the subject of this sketch by the very excellent paper of his, "The Spring Migration of 1907 in the Vicinity of Chicago," appearing in the March number of 1908. Additional articles have been published by him in "The Auk" and "The Condor," and at the time of his death he was working out a paper based upon the results of the Costa Rican, or Central American, trip previously mentioned. Tall in stature and of a dignified and courteous bearing, Mr. Ferry united to these an amiable turn of mind. He was a young man of exemplary habits and high ideals, and bid fair to achieve distinction as well in the science of birds. His loss to Illinois and to ornithology, therefore, will be keenly felt. B. T. G.

REVIEWS.—BIRD MAGAZINES.

ORNITHOLOGISCHE MONATSSCHRIFT, VOL. XXXIV. 12 Nos.—This German monthly always contains interesting matter and shows that there are new things to be found in the life histories of birds even in old fields of work. The main object of the society, which

publishes the journal, is a sound and sane protection of birds in a practical way, no ultrafaddism is displayed, no exclusive leaning towards either the opera-glass or shotgun wing of ornithologists, but a position similar to that of the WILSON BULLETIN *id est* protection of birds in general and a due allowance for the taking of birds, their nests and eggs for strictly scientific purposes. It is interesting to note that the idea of introducing a Bird and Arbor Day is advocated for Germany and Austria, that bird colonies on some of the North Sea islands are carefully protected, showing a handsome increase of species and individuals in almost every case and that a severe condemnation of the ruthless slaughter of song birds for the market in Southern France is expressed. The paintings of birds are good, the photos however, although Germany furnishes us the best lenses, are not up to the American standard. Only two real good bird photos are in the entire volume, one of a mounted albino Kestrel, the other one of a pair of Caspian Terns at their nest, both in the April number. A series of articles on the Hawks of Germany is begun, similar to the Falcones of North America in the WILSON BULLETIN. Good Field Notes and Reviews of recent publications are prominent features of the periodical. Good scientific popular life histories of birds are always gladly received, for the average German bird student is a man of good education, highly intellectual and of a true soul life and willingly recognizes these qualities in other men, in great contrast to the average condition in America. Quite a number of the Wilson Club members are also members of this German society and readers of its splendid publication, which justly deserves a greater patronage in the United States than it is receiving at present. W. F. H.

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OLD SERIES VOL. XXII. NEW SERIES VOL. XVII.

BIRD MIGRATION AT POINT PELEE, ONTARIO, IN THE FALL OF 1909.[1]

N. A. WOOD.

As may be infered from the literature, Point Pelee is a very interesting region to the student of bird migration. Descriptions, however, while giving the facts, cannot do the subject justice and fortunate is the observer who has an opportunity of watching the migrating hordes of birds that assemble and cross Lake Erie at this place.

The credit for the discovery of the advantages of this Point for the study of bird migration belongs to W. E. Saunders of London, Ontario, who studied birds there as early as 1882. In 1905, Taverner and Swales began a study of the subject, and the continued visits of these three earnest bird students materialized in June, 1907, when Taverner and Swales published a paper on the bird life of the Point.[2] This paper is not merely a list but contains also an account of the habits of many species. In August and September, 1907, Taverner, Swales, and others extended to me the hospitality of their camp at the Point, and I spent a few weeks there observing the migration. The time was too brief to permit of much work on this trip, but in September, 1909, on an appropriation

[1] From the University of Michigan Museum.

[2] Taverner, P. A., and Swales, B. H., annotated List of the Birds of Point Pelee, Wilson Bull., June, 1907, and September, 1908.

made to the University of Michigan Museum for that purpose, by Mr. Bryant Walker, and with the permission of the Canadian government, I was able to spend four weeks there. Owing to the lateness of my start (Sept. 14) I feared I should miss the hawk flight, which, in 1905, occurred September 10 and 11, but conditions favored me and they had not yet commenced to collect on the Point.

I was favored in obtaining permission of Mr. Albert Gardner to reside at his home. Mr. Gardner and his family afforded me every assistance possible, including specimens of many of the birds that came to their game bags during the hunting season. In fact, I should acknowledge my indebtedness to all of the residents on the Point for data and specimens.

A glance at the map of Point Pelee will show that my position near the south end of the big marsh and only two miles from the extreme end of the Point was quite advantageous. All of the water birds followed the beaches to the end of the Point; the land birds followed the line of trees and cleared fields. For a detailed description of the region see the paper by Taverner and Swales cited above. In my notes, which I give in a diary form, I shall give the movements of the more common, as well as of the rarer species.

September 14—I left Walkerville at 7:30 a. m., and after a ride of about two hours arrived at Leamington, which is near the base of the Point On the way I saw numbers of Sparrow Hawks, and of course expected to see a flight of them. [During my stay on the Point I saw only one pair, an adult male and an adult female. This seemed very singular, as the country to the north of the point was full of them. It should be noted in this connection that no flights of this species have been known to migrate down this Point, although Taverner informs me that he saw flights on the adjacent main land on September 13 and August 14, 1906.]

I left Leamington at 10 a. m., and after a pleasant drive of about eight miles, arrived at Mr. Albert Gardner's. On the way I saw several Sharp-shinned and Cooper's Hawks,

but was told that the flight had not commenced. I also noticed flocks of Crows, Meadowlarks, Red-winged Blackbirds, and Sparrows, and Mourning Doves were common. From Leamington to the Gardner place I saw very few birds; a few Crows, Sparrows, a Dove and several Sharp-shinned, and one Cooper's Hawks making up the list. In the afternoon I made a short trip east of Gardner's to the beach and back, and observed an immature male Sparrow Hawk and a Female Broad-winged Hawk. I also patrolled over two miles of the beach on the east side and toward the Point, but saw only the Spotted Sandpiper, a Bald Eagle, a Brown Thrasher, and two Marsh Hawks, both of the latter immature.

September 15—I made a trip to the west beach and found three Spotted Sandpipers. A number of Sharp-shinned Hawks flew over the woods, and twenty-five others were at the end of the Point. Two Cooper's Hawks were also seen, and about fifty Herring Gulls were resting on the sand spit at the end of the Point. On the return trip I saw a Broad-winged Hawk in the woods near the road. [The latter with the one taken September 14 were the only ones seen by the writer.] Other species observed were a Woodcock, and two Bitterns in the marsh. In the afternoon I went up the east beach to the fish camp, and on the way saw a Duck Hawk, a flock of about twenty-five Yellow-legs flying south and high up over the beach, a few Spotted Sandpipers on the beach, one Hummingbird, two King Rails on the marsh side of the beach, and two Green-winged Teal. Albert Gardner shot to-day the first Coot seen and noticed a Whip-poor-will in the door-yard in the early morning.

September 16—Early in the morning I worked out to the end of the Point, and on the way saw flocks of warblers. Those identified were the Myrtle, Black-poll, Bay-breasted, Palm, Black-throated Blue. The Olive-backed Thrush was also seen. These no doubt came to the Point during the night as none were seen the day before. At the end of the Point I saw the same hawks as yesterday, with the addition of the Pigeon Hawk. About two hundred Herring Gulls

were on the sand spit to-day, all facing the east wind, and there were about fifteen Cedar Waxwings in the red cedar trees near the end of the Point.

September 17—Another trip to the end of the Point this morning revealed about the same number of hawks, but none of them seemed to be migrating. They were scattered over the Point, and I found several birds (thrushes) that had been killed by them. About a hundred Gulls were on the sand spit. On the way back I saw one Whip-poor-will and a very few warblers and Red-eyed Vireos. The Wood Pewee was common. In the afternoon Albert Gardner and I made a trip to the east beach, and in small trees and bushes along the sand dune saw flocks of Palm, Black-poll, Black-throated Green Warblers, and, along the edge of the marsh, the Northern Yellow-throat, Long-billed Marsh Wren and flocks of Savanna Sparrows. Other birds observed were one Blue-winged Teal, Bitterns, a few Chipping and Song Sparrows, and several Marsh Hawks soaring over the marsh. These birds had arrived the night before as the ground was barren on the previous day. On the way back we saw six Woodcock in the thicket at the end of the swamp. Albert Gardner said the great flight of them passed in August. This was my first experience with the Savanna Sparrow in this latitude during the fall migration. Taverner saw it near the marsh on September 11, 1905, and in great numbers in the marsh on September 11 and 12, 1906.

September 18—Flocks of White-throated Sparrows were seen in Gardner's yard with Song and Field Sparrows, and the Red-breasted Nuthatch was seen for the first time. All the above species must have migrated to the Point during the night as none were seen the day before. A large flock of Cedar Waxwings was seen flying about the Point, and a Cooper's Hawk came into Gardner's yard and carried off one of the small chickens. In the morning the trees on the Point were full of small birds, some of them being warblers already mentioned, with large numbers of Ruby-crowned Kinglets. There was also an increase in the number of hawks. I saw several

Marsh Hawks, Red-tailed Hawks and Cooper's Hawks, all immature birds. Other birds observed were a Duck Hawk seen, and a Lincoln's Sparrow shot, by W. E. Saunders [the latter specimen being the only one seen by the writer] and the Carolina Wren observed by Wallace.

September 19—To-day the Kinglets were scarce and most of the smaller birds seemed to have left in the night. Olive-backed and Gray-cheeked Thrushes were common, and Mr. Saunders saw an Osprey, a Duck Hawk, and two Whip-poor-wills. There was an increase of hawks, the commonest bird on the Point to-day being the Sharp-shinned Hawk. They commenced migrating this morning and came down the Point by the hundred. Many of them no doubt crossed over, while others spread over the Point and looked for small birds, which were scarce and in hiding.

September 20—Saunders and I walked to the end of the Point before daylight this morning and found the hawks already arriving from the north. Those who have never read an account of these flights should read Taverner and Swales' description in Wilson Bulletin, No. 60, p. 92. Saunders climbed the watch tower near the end of the Point, while I walked to the extreme end of the zone of small trees and sat behind a small cedar that concealed all but my head. Faster than I could count them they came singly and from the north (or base of the Point). As the wind was strong most of them flew low and on out to the end, then straight away to the south about in a line with Sandusky. As I sat perfectly still many of these birds flew so close and low that I could touch them with my hand, while many of them seemed tired and alighted on the dead trees and bushes, some within a few feet of where I sat. After a time I also climbed the tower, and as we stood there in plain view we could see hundreds of hawks coming, always from the north, and passing above, below and all around us, often within a few feet of our heads. Most of those observed were Sharp-shinned Hawks in the striped plumage, but we saw at least fifty Marsh Hawks, also immature, two Duck Hawks and two Pigeon Hawks. The hawks came

nearly all the forenoon, and there must have been many thousand of them that passed over the lake, while hundreds turned back and lingered on the Point. [During the three days that this flight continued, and for the rest of my stay, or until October 15, I found the Sharp-shinned common. The later birds were nearly all adults.] I saw one Osprey on this date, and on the east beach one Semipalmated Plover. A flight of Woodcock occurred last night.

September 21—I was busy with specimens all the forenoon to-day, but in the afternoon I walked to the end of the Point. I found the beach deserted, a single Brown Thrasher only being observed. Saunders told me that the rest of the hawks crossed the lake in the forenoon. In all the region where the day before I saw hundreds I did not see even one. All the small birds had also left the Point the previous night. At the end of the Point a large flock of Herring Gulls were resting on the sand spit. Toward evening I saw a Sharp-shinned Hawk coming from the north, and one Downy Woodpecker.

September 22—I made a trip to the Point and found only one Sharp-shinned Hawk, one flicker, and on the east beach one Pectoral Sandpiper. I also made a trip north from Albert Gardner's for a mile and then east to the marsh, seeing two Sharp-shinned Hawks, two Flickers, a few Chipping and Field Sparrows, and one Marsh Hawk.

The Gardner boys went to the big marsh and reported a number of Black Duck, which they estimated at one hundred, about the same number of Wood Duck, ten Bitterns, nine Coots, ten Green Herons, one Black-bellied Plover, fifty Green-winged Teal, twenty Semipalmated Sandpipers, twenty Least Sandpipers, twenty Black-crowned Night Herons, twenty Semipalmated Plovers, thirty Florida Gallinules, one Duck Hawk, ten Sora Rails, one King Rail, two Virginia Rails, one Killdeer, two Great Blue Herons, one hundred fifty Blue-winged Teal, fifty Wilson's Snipe, fifty Crows, three Kingfishers, and fifty Pectoral Sandpipers. The water in the marsh is low, exposing bogs that afford rich feeding ground for all sorts of waders. This is late in the season for many

species, but stragglers of the early migrants are still here, and the advance guard of the later ones have just arrived. Among the former were the Least Sandpiper, Black-bellied Plover, and Yellow-legs. Those just coming are Wilson's Snipe, Greater Yellow-legs and Golden Plover. The Turnstone and Piping Plover are gone.

September 23—I heard the notes of a Screech Owl for the first time today. A trip to the west beach showed that the birds are still scarce on the Point. All that I saw were one Herring Gull, one Mourning Dove, two Great Blue Herons, and one Woodcock. Albert Gardner shot a Wood Duck and reported thirty?five seen. Seven Black Ducks, three Cooper's Hawks, two Sharp-shinned Hawks, and a Coot were also seen.

September 24—This morning I saw a few Red-tailed Hawks soaring about over the house and yard, but slowly working south. Numbers of Sharp-shinned Hawks also flew over but in a more direct line. On the beach near the end of the Point there was a small flock of Sanderling the first I have seen since I arrived. Other specimens seen were, two Savanna Sparrows, a Barred Owl (?), a Cooper's Hawk, and about fifty Herring Gulls.

September 25—This morning I found the Point occupied by flocks of Olive-backed, Gray-cheeked, and a few Hermit Thrushes, and a small flock of Golden-crowned Kinglets, and Red-breasted Nuthatches, while in the open were flocks of Juncos, Field and Chipping Sparrows. I also saw about fifty Bob-whites in a patch of buckwheat. Crows also were gathering. On the marsh Maxim Gardner saw about one hundred Coot, three Greater Yellowlegs, two hundred Black Ducks, and eleven Wood Ducks.

September 26—Last night there was a decided movement of sparrows. The White-throated came in large numbers and was to be seen along the fence rows and fields and in the junipers at the edge of the beaches, and in fact, all over the Point. A few warblers also came, and among them I saw two Cape May. A few White-crowned Sparrows were seen, and

a couple of immature Bald Eagles flew up and down the Point. There was also a decided increase in the number of Cooper's Hawks and more Red-tails than I have ever seen before. A flock of about twenty-five of the latter sailed about the Gardner clearing ,but worked south and was soon out of sight. There must have been a migration of Whip-poor-wills also, as I saw five in a small area near the tower; here also I saw one Black-throated Blue Warbler and one Cape May. For the past few days the Flickers have been coming down the Point, and to-day are here in considerable numbers. I saw the remains of one killed by a hawk at the end of the Point. I also saw one Yellow-bellied Sapsucker, the second one seen here. The Olive-backed, Gray-cheeked, and Hermit Thrushes are here in some numbers. Crows are still flocking, but are still farther up the Point near the base. A few Sharp-shinned Hawks were seen to-day.

September 27—This morning the Point was full of small birds. I noted a few warblers (Myrtle and Bay-breasted)' numbers of Phoebes, and an increase in all kinds of sparrows. I went into the marsh with Albert Gardner and on the mud bogs saw numbers of Wilson's Snipe, two Red-backed Sandpipers, a few Semipalmated Sandpipers, one Semipalmated Plover, four Bitterns, fifty Coots, twenty Killdeers, nine Blue-winged Teal, thirty Green-winged Teal, about one hundred Black Ducks, ten Wood Ducks. Other birds seen to-day were ten Red-tailed Hawks, several Marsh Hawks, a few Sharp-shinned and Cooper's Hawks, one Kingfisher, and a flock of about thirty Goldfinches.

September 28—Last night seemed a favorable one for migration, and the small birds mostly moved on. Today the Point was silent and deserted where yesterday it teemed with bird life. I saw only one Sharp-shinned Hawk, and Albert Gardner saw a Brown Creeper.

September 29—A trip to the end of the Point and return gave me some interesting records. At the end of the Point I saw a fine Duck Hawk and about two hundred Herring Gulls. In the low thick red cedars near the end were a few Black-

throated Blue, Myrtle and Magnolia Warblers, small flocks of Golden-crowned Kinglets. Ruby-crowned Kinglets were common everywhere. I also saw one Red-breasted Nuthatch, and a few Savanna Sparrows. On the way back I shot three Cooper's Hawks. One of them was an adult male, the first adult bird I have seen. A duck hunter secured a Golden Plover on the beach, and Albert Gardner reported ten Ruddy Ducks, one Pintail, and a few Wilson Snipe in the marsh.

September 30—There was a decided increase in the warblers today. In addition to those seen yesterday, I noted Canadian, Cape May and the first Redstarts. On the east beach I also saw flocks of Palm Warblers feeding in low willow bushes along an old fence. They also lit and fed on the ground and were very tame. White-throated Sparrows were everywhere in the bushes along the Point and in the clearing south of the Fish Camp. Mr. Grubb saw an Owl in the clearing. As it flew from the ground, it may have been a Short-eared. I also saw a few thrushes, all four of the species that have been so common here on the Point and which seem to furnish the bulk of the food of the migrating hawks. The earliest ones are the Wilson and Olive-backed, then come the Gray-cheeked, and last but by no means least the Hermit.

An accurate account of the migration of these species at this place will be found in "Birds of Point Pelee" Wilson Bulletin, No. 64. pp. 113-114.

October 1—On a walk to the end of the Point to-day I saw several Cooper's and two Sharp-shinned Hawks, also a couple of Short-eared Owls. This is the second record of the latter species for the Point, although an owl has been seen several times in the marshes by the Gardners that no doubt was this species. It was noted by Saunders, November 20-23, 1908. The ones I saw were at the extreme end of the Point, where one flew about much as the gulls were doing. A few of the Herring Gulls seemed inclined to attack the owl and drove it back to the shelter of the Point.For the first time I have seen a flock of Blue Jays (fifteen of them) that acted as though about to migrate. In fact this species has been very rare on

the Point since my arrival and has only now made its appearance in flocks, which fly up and down the Point. A flock of Palm Warblers was seen; also a few Black-throated Green Warblers, while the Point was covered with Ruby and Golden-crowned Kinglets. A few Downy and Hairy Woodpeckers and a Scarlet Tanager were also seen.

At the marsh the Gardner brothers shot three Red-backed Sandpipers and one White-rumped Sandpiper, the latter the first one recorded from the Point. (Not given in Taverner's list.) They also saw Greater Yellowlegs, three Pintails, three Ruddy Ducks, one Cardinal ,and one Red-breasted Merganser. The Yellow-bellied Sapsucker and the White-throated Sparrows are now seen in numbers.

October 2—Today I went to the marsh with Albert Gardner and Saunders. The following records were secured: three Golden Plovers, about one hundred Green-winged Teal, fifty Blue-winged Teal, eleven Black Ducks and ten Wood Ducks. On the mud bogs we saw numbers of Red-backed Sandpipers, Wilson's Snipe and about twenty Killdeer. Saunders shot a fine Connecticut Warbler, and I saw a flock of Bonaparte's Gulls (about twenty) in the same place. Large flocks of Red-winged Blackbirds were seen today and about fifty Sharp-shinned Hawks. Mr. Saunders also reported seeing about five hundred Bonaparte's Gulls, about two hundred Herring Gulls and ten Common Terns at the end of the Point.

October 3—The bird life on the Point was apparently about the same today as yesterday. About two hundred Bonaparte's Gulls and the same number of Herring Gulls, and about one-hundred and twenty Cowbirds were observed. A fine Duck Hawk was also seen perched on the roof of the Life Saving Station. This bird was so tame that Taverner made photographs of it at close range.

October 4—Two Pipits were seen on the sand spit at the end of the Point today, also numbers of adult Cooper's Hawks and adult Sharp-shinned Hawks. A few Red-tailed and Red-shouldered Hawks were seen flying down the Point, and I saw one Eagle and a Duck Hawk. The Woodcocks are quite com-

mon. The Ruby-crowned Kinglet is now the most common bird on the Point and there are numbers of the Golden-crowned also. A flock of about sixty Blue Jays went down the Point, but came back, as did also about a thousand Red-winged Blackbirds. In the big marsh about one hundred Mallards, ten Green-winged Teal, forty-two Coots, four Bitterns, twenty-two Wood Ducks, and eight Sanderling were reported. Six Henslow's Sparrows were seen in a low marsh near Gardner's.

October 5—On a trip to the end of the Point this morning numbers of Sharp-shinned and Cooper's Hawks were seen. On the sand spit were two Pipits, and at the extreme end ten Sanderlings and about one hundred Herring Gulls. In the juniper bushes near the end of the tree limit I flushed three Short-eared Owls, and in the lower cedars I saw a Palm Warbler. On the Point the Yellow-bellied Sapsucker is still rather common, and the Jays and Crows are gathering in flocks. A large wave of song and other sparrows came last night. Saunders shot an Orange-crowned Warbler near Gardner's house. [This is the only one noted during my stay, and it seems to be a rare migrant in this region.]

October 6—At the end of the Point to-day there were large flocks of Crows and Jays that flew down and back, but did not cross the lake. The Cooper's and Sharp-shinned Hawks were about the same as yesterday and nearly all adults. The Short-eared Owls have gone as have also many of the Song and White-throated Sparrows. A large flock of English Sparrows came to the end of the Point and acted like the other migrating birds. Taverner told me that this species had been seen to cross over to Pelee island and no doubt crossed the lake. Numbers of Myrtle Warblers were seen; also twenty-five Phœbes, fifty Common Terns and five Sanderlings. A steady movement of hawks was observed nearly all day, but was more noticeable in the forenoon, as was usually the case with this species. Two fine Red-shouldered Hawks, a few Red-tailed Hawks and a Bald Eagle came soaring over the Gardner clearing. In the evening I saw two Robins, two Bluebirds, and

three Woodcocks. A Great Blue Heron was recorded by Mr. Grubb and three Horned Grebes by Swales.

October 7—On a trip to the end of the Point with Swales and Taverner a small flight of Sharp-shinned, a large number of Cooper's, and one Red-shouldered Hawk were seen. The most of these birds were adults and in beautiful plumage. One Bald Eagle was seen, and at the sand spit a few Herring Gulls and one Common Tern. Other birds seen today were Brown Creepers, eight Hermit Thrushes, ten Sanderling, twenty-five Myrtle Warblers, and five Woodcocks.

October 8—Many hawks, principally Cooper's and Sharp-shinned were also seen today. In the afternoon I saw both species all over the Point. Two immature Eagles soared over Gardner's clearing. Flocks of Field, Song, White-crowned and White-throated Sparrows were common about the clearings and the low bushes on the Point, and I saw one Henslow's Sparrow in a low meadow east of Gardner's. Juncos were also common about bushy clearings, and at evening I saw a Night Hawk soaring about at the edge of Gardner's clearing near low timber.

October 9—But few hawks were seen today, most of them having apparently passed on. Those that remained roamed over the Point catching the Thrushes, and one (a Cooper's) came to Gardner's yard for a chicken. Bald Eagles were seen and a large flock of Crows (about one hundred) went down the Point and back several times during the day. A flock of about seventy-five Blue Jays flew back and forth; large flocks of sparrows of all kinds were scattered over the Point. Large flocks of blackbirds, mostly Redwings, went down to the Point early in the morning, and one flock of Bluebirds was seen. One lone Sanderling was observed at the end of the Point.

October 10—Conditions remained about the same today. The same (?) large flock of Crows flew up and down, and a few Cooper's Hawks were seen. Numbers of Sharp-shinned Hawks roamed over the Point, but the Kinglets were not as common although the sparrows seemed about the same as on

the previous day. A large flock of Goldfinches was noted and about one hundred Herring Gulls at the end of the sand spit.

October 11—A trip across to the east beach and north to the big pond showed that the birds were very scarce today. A few Song, Swamp, and Savanna with some White-crowned and White-throated Sparrows, and a few Palm Warblers were seen.

At the pond I say five Red-head Ducks, one Green-winged Teal, one Kingfisher, five Red-backed Sandpipers, ten Marsh Hawks, fifty-five Coots, six Bitterns, fifty Black Ducks, one Sora Rail, and thirteen Wood Ducks. Gardner saw twenty five Golden Plover, four Great Blue Herons, four Sanderlings, two Shovellers, and twelve Wilson's Snipe. The hawks are nearly all gone from the Point to-day, except the Marsh Hawks ten of which were seen at the big marsh.

October 12—A trip to the end of the Point to-day revealed very few birds. A few White-throated and White-crowned Sparrows, House Wrens and Winter Wrens, Kinglets, and three Palm Warblers were noted. At the end of the cedars I shot an immature female Cooper's Hawk, but saw only one Sharp-shinned Hawk. A large flock of about three hundred Tree Swallows came (flying low to keep out of the wind as much as possible) to the end of the Point, but after they passed the shelter of the cedars the wind blew them back and they lit in the edge of the clearing on low bushes and on mullein stalks. When I scared them up they flew again toward the end of the Point but came back and went off up the Point probably to the big marsh where the Gardner boys saw them.

October 13—I made another trip to the end of the Point today, where I saw a large flock of Tree Swallows. The wind blew so hard that the birds kept along the east side of the Point out of the wind a little, where they lit on the beach and seemed to be picking up food from the sand. Dozens of them lit within a few feet of me, and they seemed rather exhausted with the cold and wind and probably with insufficient food. After feeding a short time they all flew back to the edge of the clearing, where they lit on weeds and low bushes and

seemed stupid and dull. I saw one immature male Cooper's Hawk and a few kinglets. Sparrows are very common, I identified large flocks of Field, White-throated, and White-crowned. In the big marsh the Gardner brothers saw sixteen Greater Yellow-legs and shot several. They also saw two Golden Plover, about two hundred Mallards, twenty-five Black-crowned Night Herons, twelve Wilson's Snipe, one hundred Coots, seventy-five Redhead Ducks, six Bitterns, five hundred Black Ducks, twelve Wood Ducks, one hundred Pintails, five hundred Baldpate, and seven Red-backed Sandpipers. This cold, windy weather is hurrying the ducks and waders here from the north and northwest. Albert Gardner says the Wood Ducks are generally gone before this date, and it is late also for the Night Herons. It would also seem late for the Tree Swallows which are dependent on flying insects for their food. The wind has blown so hard here for five days that they cannot find insects in the air, and it is also cold.

October 14—There seemed to be no movement of birds last night. The day's records are as follows: Twenty-five Greater Yellow-legs twenty-five Golden Plovers, twelve Wilson's Snipe, two hundred Coot, one Lesser Scaup, one Woodcock, four Bitterns, one hundred Great Blue Herons, three hundred Mallards, six Black-crowned Night Herons, twelve Marsh Hawks, one hundred Redhead Ducks, fifty Black Ducks, twenty Pintails, one hundred Baldpates, two Tree Swallows, one Short-eared Owl, one Yellow-bellied Sapsucker, one Cooper's Hawk, one Sora Rail, one Osprey, one Long-billed Marsh Wren, one Sharp-shinned Hawk, one Robin, one Flicker, three Meadowlarks, and six Goldfinches.

The Great Blue Herons were migrating in a great flock and must have come from the north as only a few of this species have been seen about the marsh. The Red-head Duck with the Canvas-back and Scaup are the last ones to arrive, and the duck hunters say that when they come the shooting, as far as the other species are concerned, is nearly over. No Wood Ducks were seen.

October 15—As soon as it was daylight this morning I could see the flocks of blackbirds, mostly Redwings, but some flocks of Bronzed Grackle, coming from the north and passing over the house in an almost continuous stream. Large numbers of Meadowlarks, about five hundred, singly and in flocks also, passed over. Later in the morning there were large numbers of hawks, one hundred Sharp-shinned, twenty Cooper's, eight Red-tailed, and one Rough-legged. Later I made a trip to the end of the Point where I found the kinglets common, also the Hermit Thurshes, Winter Wrens, and a few flocks of Bay-breasted Warblers. In the clearing below Grubb's fish house there were large flocks of Meadowlarks, and I saw one adult male Marsh Hawk, the only one that I observed during my stay. The rest were either females or young. A flock of five hundred or more Bluebirds occupied the Grubb clearing and were on the ground, or on the wild rose bushes and weed stalks. At the sand spit I saw about fifty Herring Gulls and six Sanderling. Over all the Point there were flocks of sparrows, mostly White-throated and Field, but many Vesper and Song, and some White-crowned. Near Grubb's clearing I saw a Turkey Vulture soaring about over the trees, and with the glass could plainly see his naked red head and neck. This seems to be a rare species on the Point. To-day the Flickers were very common again, and other records were secured as follows: a few Jays, two Yellow-bellied Sapsuckers, and at evening a Nighthawk. About three hundred Crows flew up and down the Point all day. A large flock of Goldfinches was seen near the clearing. One Kingfisher, six Towhees, twenty Winter Wrens, three Whip-poor-wills, one Black-billed Cuckoo were also observed. Albert Gardner saw three Killdeers, twenty Black Ducks and one hundred Baldpates in the big marsh. Juncos are common here now, and the Olive-backed and Hermit Thrushes as well.

October 16—The bird life on the Point today was much the same as yesterday. Flocks of blackbirds, Meadowlarks, Bluebirds, Sharp-shinned, Cooper's, one Red-tailed, and one Rough-legged Hawk were seen. Hundreds of Crows flew up

and down the Point several times. The sparrows were not much in evidence today, most of them apparently having gone south during the night. I saw a large number of Towhees, and three species of thrushes were common again. The Hermit was the most common, the Olive-backed next and the Grey-cheeked least abundant. I also saw a few Brown Thrashers and Catbirds, and one Northern Yellow-throat on the ground under the cedars at the end of the Point. I shot a Duck Hawk at the end of the Point, and one Bonaparte's Gull from a flock of about thirty. I also shot a Pectoral Sandpiper and saw six Sanderling and one Pigeon Hawk. I saw the first Fox Sparrow that I had seen here, and a few Tree Swallows flew along the beach. Other records were seven Mourning Doves, six Phoebes, one hundred Goldfinches, one Blue Jay, five Black-billed Cuckoos. In the big marsh Albert Gardner saw six Marsh Hawks, twenty Mallards, twenty Green-winged Teal, six Horned Grebes, one Lesser Scaup, two Bitterns, twenty Black Ducks, twelve Pintails, twenty Ruddy Ducks, two Golden Plovers, one hundred Baldpates, one Bald Eagle, and two Great Blue Herons.

This was my last day's work at Point Pelee, and, while it had been a very busy and strenuous thirty-three days, it was an experience that can but remain a delightful memory in the mind of an enthusiastic bird-lover. The phenomena of migration are interesting enough wherever studied, but the interest is greatly increased when they are observed in such a locality as Point Pelee, where the migrating hoards are concentrated in a small area that can be readily covered by a single observer.

ALEXANDER WILSON.

VIII. His Early Life and Writings.

BY FRANK L. BURNS.

The Wilsons were strict Covenanters, originally from Lochwinnoch, Renfrewshire, but had been driven by persecution to seek refuge in Campbelltown, Argyleshire. The elder Alexander was born in 1728 and early returned to the shire from whence his grandfather had fled, settled in Paisley and took up the occupation of weaving, for which the town was famous. He married Mary McNab, who came from the "Row" in Durbartonshire to Paisley during her girlhood. Ord states that she was a native of Jura, one of the Herbrides or Western Islands of Scotland. Alexander, Junior, the fifth of the six children, was born on the 6th of July, 1766, within sound of the Falls of the Cart river, in a little suburb of Paisley known as the Seedhills. The house in which he was born has long since disappeared and another of the same height built in its place. It commanded a fine view of the river below the falls and overlooked the Hamels — the highest part of a range of craigs over which the stream rushes, forming a beautiful and romantic waterfall. To distinguish this house from the others in the row, David Anderson of Perth, in 1841, placed a tablet in the front wall to mark the birthplace of the Paisley poet and American ornithologist.

History has drawn a most gloomy picture of the life and condition of the common people of Scotland during the eighteenth century; their wretchedness frequently accentuated by immorality and intemperance. The father of our future ornithologist, notwithstanding of sober and industrious habits, of strict honesty and superior intelligence, highly respected by all who knew him, as testified by Dr. Hetherington; nevertheless interested himself in a small distillery plant hidden in his garden, illicit for at least part of the time and for that reason all the more commendable in the opinion of his good neighbors and patrons. The father outlived his distinguished son, departing this life on the 5th of June, 1816, at the ripe old age of eighty-eight years. His mother is said to have been comely,

pious, passionately fond of music and in many ways a superior woman. It was her fond hope that Alec would become a minister of the gospel and it is said that for a short time he was placed under the tuition of Mr. Barlas, then a student of divinity. She died of consumption when he was but ten years of age, and the father left with the surviving members of his family, a son and two daughters, soon married a widow, Catherine Uric *nee* Brown, who also had a family of young hopefuls. It has been said that Ord has given an erroneous impression of his stepmother. I am not so sure that he has; yet Wilson always wrote of her with respect and gratitude. Of Wilson's childhood little is known beyond knowledge of of a limited and interrupted attendance at the Latin-Grammar school of Paisley and the statement, since disputed, that he was a "herd callan" for at least one season at the Bakerfield farm. Jardine states that he was herd to a Mr. Stevenson of Treepwood, near Lockwinnoch. According to tradition "he was a very careless herd, letting the the kye transgress on the corn, being very often busied with some book." By some good fortune his father had come into possession of a collection of magazines and essays, and these were the very first books to give him a fondness for reading and reflection.

Soon his father, burdened with an ever increasing family, could no longer support him in school, and after his thirteenth birthday he was apprenticed for a term of three years to his brother-in-law William Duncan, who bound himself to furnish the boy with bed, board, clothing and washing suitable to his station, and with John Finlayson, a journeyman, as cautioner, to instruct him in the art of weaving, the indenture being signed on July 31, 1779. For perhaps four years after serving his time, Wilson continued at this employment as a journeyman in Paisley, Lockwinnoch, and finally in Queensferry, near Edinburgh, whither his former master had removed; the wages being about a shilling a day. The time had come when the fame and genius of the greatest of all Scottish bards thrilled all Caledonia; and Wilson longing to emulate his example, produced a number of verses in the Scottish dialect, of

little or no merit. Yet he too enjoyed an uncertain local celebrity, and it is related that while he worked at the loom in Lockwinnoch, he was importuned by one of his fellow shopmates who excelled in little, but had the habit of "dandering" about the hedgerows and whin bushes in search of birds nests on Sundays; to write his epitaph. Wilson silenced him with the following:

"Below this stane John Allen rests;
An honest soul, though plain;
He sought hale Sabbath days for nests,
But always sought in vain."

Wilson's dislike for the occupation of weaving as much as the knowledge of the injury the constant bending over the loom was effecting upon his health, influenced him to abandon the trade for the pack about 1786, traveling through southeastern Scotland on foot. It was about 1788 when he had visited the great song poet at Ayrshare, and writes: "Blessed meeting, never did I spend such a night in all my life. Oh, I was all fire! Oh, I was all spirit . . . . I have now more deep regard for the muse than ever." In 1889 he collected his writings and having arranged with John Neilson a local printer for their publication; armed with a proposal in the form of a rhyme, "resolved to make one bold push for the united interest of pack and poems." The following year his octavo volume of 308 pages appeared [1] and his journal is full of his unsuccessful attempts to dispose of the edition of only 700 copies. A second edition, merely 500 copies of the original, with a new title,[2] some omissions and additions, followed in a pitiful effort to obtain patrons. Hutchinson says that this great change was effected by merely cancelling a number of pages and substituting newly printed pages.

He appears to have taken considerable pains, and had resource to a curious shift to conceal from the public the

[1] Poems by Alexander Wilson, Paisley, Printed by John Neilson, 1790.

[2] Poems, Humorous, Satirical, and Serious, by Alexander Wilson, Edinburgh, 1791.

melancholy evidence of the unsuccessful sale of the book. On the last page of the work was the word "Finis," in large type, and to save the reprinting of this page, he had impressed by hand, a stamp of a round pattern, so as to obliterate it; the 32 pages added contained a continuation of his curious prose journal. The duel occupation of pedlar and poet does not seem to have been a happy combination, and he was confronted with the dreaded alternative: "Renounce poetry and all its distracting notions, descend to the laborer's vale of life, there attend the dictates of prudence, and *toil or starve.*"

As Wilson advanced in knowledge he became ashamed of his boyish publications. Lawson once attempted to criticise and he snatched the volume from his hand and threw it into the fire. Ord could not induce him to loan or allow him to read the copy in his possession. On the fly leaf he had written: "I published these poems when only twenty-two, an age more abundant in sail than ballast. Reader, let this soften the rigor of criticism a little.—Gray's Ferry, July 6th, 1804."[1]

Though open air work had improved his health, he was not yet capable of great physical exertion without evil results. In January, 1791, he writes his father that he was scarcely able to move for four days after running one stormy night from Paisly to Glasgow and back again, a round trip of about twelve miles.

In 1792 he published anonymously at a penny a copy, his best dialect poem "Watty and Meg or the Taming of a Shrew." It passed through seven or eight editions and was at first ascribed to Burns, which gave the author a great deal of satisfaction. It is a faithful word picture of a vulgar type, reflecting the vices of the time; and at once entitled Wilson to a seat among the minor poets of his country. The sale of the

[1] Robert Smith, bookseller in Paisley, is said to have published a collection of Wilson's minor poems in 1814, title not given; but an 1816 collection, which should not be confounded with the so-called "Crichton" edition of the same date, is entitled: Poems, Chiefly in the Scotch Dialect, by Alexander Wilson, Paisley, Printed by J. Neilson, for R. Smith, Booksellers, 1816, pp. 1-228 (about 3x5 inches).

poem was so rapid that Mr. Neilson, the printer, sold in a few weeks, it is said, the vast number of 100,000; and the author's recompense reported as twelve copies of his own poem. To the latter assertion by Wilson to a third person, Neilson replied, "It is all true, but did he tell that I became security for a *coat to him*. I suppose not; well, *I had to pay for it*."

It is said that he furnished the words of seven hymns for Robert Gilmour's "The Psalm-Singer's Assistant," published in Paisley in 1791; and the material for the "Spouter," separately published, being a collection in itself; the best is a piece entitled "The Spirit of the Lake's Song." The chorus:—

"Then hark! hark! hark!
To my fairy song:
As I dart like a spark
The clouds among,
In sovereign sway,
Till break of day,
Chanting with glee my wild war song."

Wilson had returned to the loom, but continental Europe was in a ferment, British exports fell off, and times became almost unbearable. In the inevitable dispute between capital and labor over the reduction of wages Wilson threw all his strength of a mind made bitter by want and adversity on the side of the workingman, publishing anonymously several crude lampoons, one of which was entitled "The Shark, or Lang Mills Detected." He was suspected, and waylaid coming from the printer. William Sharp, the manufacturer, considered himself libeled, so Wilson was fined and condemned to burn the satirical verses at the public cross, Feb. 6, 1793. Under the date of May 21, he writes from the Paisley jail to David Brodie: . . . . I sincerely thank you, sir, for the token of friendship which you have sent me, which I will repay as soon as Providence shall open the door for my release from this new scene of misery, this assemblage of wretches and wretchedness, . . . Being unable to pay the sum awarded against me, which is in *toto* £12, 13s. 6d., I yesterday gave oath accordingly, and had the comfort to be told that Mr. Sharp was resolved to punish me

though it should cost him a little money. . . ." In serving a short term of imprisonment, he had ample leisure for retrospection. Many years later, when his brother David came to America, he brought with him a collection of these pieces, thinking to please the ornithologist; but Wilson threw them into the fire, exclaiming: "These were the sins of my youth; and if I had taken my good old father's advice, they never would have seen the light."

Upon his release it became evident that his spirit was subdued, and that the notoriety he had gained made Scotland a home for him no longer. He resolved to emigrate to America, and with that end constantly in view, applied himself to the loom with feverish industry; subsisting for four months on an average of less than one shilling a week. Bidding farewell to a few friends, and taking his nephew, William Duncan, a lad of sixteen years; he walked to Port Patrick, crossed over to Belfast, Ireland, and took passage in the Swift, bound for Philadelphia with 350 emigrants, and so crowded that he was obliged to sleep upon the deck during the entire passage. The vessel sailed on May 23rd, 1794. It doesn't appear that Wilson informed his father fully of his intentions until after his arrival at New Castle, July 14, when he apologized for having caused him any anxiety or unhappiness.

Borrowing a few shillings from a fellow voyager by the name of Oliver, our future ornithologist walked to Philadelphia in urgent need of some kind of employment in order to live. John Aiken, a copper plate printer, and a fellow countryman, gave him work until he obtained employment at his trade with Col. Joshua Sullivan on the Pennypack creek, ten miles above the city at that time. Lured southward by the glowing accounts of a new settlement at Stephenstown, in Virginia, he was glad to return to weaving for a time, but soon shouldered the pack and tramped through New Jersey, and next began teaching school near Frankfort and then at Milestown, both in Philadelphia county. Three different occupations and seven changes in two years! He spent almost six years at the last

named place before moving to Bloomfield, New Jersey, which held him only a few months.

Wilson had formed plans for the acquisition of some land, and in September, 1798, Duncan set out to examine the country lying between the Seneca and Cayuga lakes, in New York. He walked the distance in eight days and remained there nearly a week, finding the soil surprisingly rich, the situation healthy and the game abundant. Wilson determined to become a farmer and arranged with his former employer, Col. Sullivan, for the purchase of 100 acres uncleared ground at $5.00 an acre on the border of Seneca Lake in Ovid township, Cayuga county, and the nephew began burning down the timber the succeeding spring. Wilson made one trip to the place about 1800, but sooner than be exposed to the ague, he decided to return to his desk, and the occasional vacation jobs at surveying he was able to secure. His nephew Alexander, and later his sister, Mrs. Duncan, and her younger children, arrived and found an asylum on the farm. Her husband, Wilson accuses four years later, of cohabiting with guilt, poverty and infamy in Ireland, after transporting a most promising family to a foreign country. He says: "I have no doubt the lash of remorse has already severely punished his unparalled inhumanity, and I wish never to see him." To the sorely discouraged nephews at Ovid, he writes cheerful letters and sends all the money he can scrape together. In a letter to his namesake, Alexander Duncan, he says: "An old weaver is a poor, emaciated, helpless being, shivering over rotten yarn and groaning over his empty flour barrel. An old farmer sits in his arm chair before his jolly fire, while his joists are crowded with hung beef and gammons, and the bounties of Heaven are pouring into his barns." But his town bred nephews longed for the city life and it required the utmost tact to keep them on the place even temporarily.

Nowhere in history has Wilson employed his descriptive powers to better advantage than in his "Foresters." It is not altogether a dreary waste of words, but whether he could have spent his time more profitably in writing a simple prose narrative of

the journey, as Ord has hinted, is another matter. Its chief fault seems to lie in its length, excessive detail and more than occasional careless composition. That it has been appreciated, the several editions would seem to attest.[1] No account of his life is complete without at least a synopsis of it, especially as he has assured us that all the incidents are substantial facts, and then it was the first and only extensive trip he ever made purely for pleasure.

Early in October, 1804, accompanied by Isaac Leech, the son of his landlady, and his nephew, William Duncan, he left Philadelphia on foot for Niagara Falls.

> "The corn stood topped, there pumpkins strewed the ground,
> And driving clouds of blackbirds wheeled around.
> Far to the south our warblers had withdrawn,
> Slow sailed the thistle-down along the lawn,
> High on the hedge-rows, pendant over head,
> Th' embow'ring vines their purple clusters spread.
> The buckwheat flails re-echoed from the hill,
> The creaking cider-press was busier still;
> Red through the smoky air the wading sun
> Sunk into fog ere half the day was done;
> The air was mild, the roads embrowned and dry,
> Soft, meek-eyed Indian Summer ruled the sky."

[1]The Foresters; A Poem: Description of a Pedestrian Journey to the Falls of Niagara, In the Autumn of 1803 [corrected to "1804" in Vol. III, p. 159]. By the Author of American Ornithology. <The Port Folio, A monthly Magazine Devoted to Useful Science, the Liberal Arts, Legitimate Criticism, and Polite Literature; Conducted by Oliver Oldschool, Esq. Associated by a Confederacy of Men of Letters. [Vol. I, June, 1809—Vol. III, March, 1810]. Published by Bradford & Inskeep, Philadelphia, and Inskeep and Bradford, New York, 16mo.

The Foresters: A Poem, descriptive of a Pedestrian Journey to the Falls of Niagara, in the autumn of 1804. By the Author of American Ornithology.=Newton [Buck's Co., Pa.]. Published by S. Siegfried & J. Wilson in June, 1818.> The Foresters, A Poem. Copyrighted, Simon Siegfried, Printer, 16mo. pp. 5-106.

Ibid. Paisley, Scotland, Published by J. Frazer, Bookseller, 1825.

Ibid. By Alexander Wilson, author of American Ornithology.—Westchester, Pa. Printed by Joseph Painter=1838. 16mo, pp. 5-106.

Ibid. Philadelphia, 1853.

On through Germantown, Chestnut Hill, fertile Bucks county and over Northampton's barren heights, describing the comfortable "Pennsylvania Dutch" farmer with fidelity. Leaving Easton behind, a spur of the Blue mountain was ascended for the pleasure of the extensive view of the Delaware and Lehigh rivers, before the northern journey was continued and a little rural school visited and commented upon as only a fellow pedagogue could. Then on to the Pocono, at that time one of the few localities in Pennsylvania where the Pinnated Grouse frequented; and "near where Tobyhanna's savage stream descends," a bear was startled from his feast of whortleberries in the great windfall of timber and two strutting Ruffed Grouse secured. That night they lodged in a settler's cabin in the Dismal Swamp, and the woodman told them tales of adventure with the wild animals of the country; and the following day being stormy, shelter was sought in a hunter's shack midst the pines near Bear creek, and the occupant made happy by a present of some of Dupont's best powder. Next Wioni came in view and Wilson found that his broken German made him welcome in the valley of Wyoming. Robins, the Bald Eagle, and the Pileated Woodpecker, which in a footnote he calls the crested woodcock or the great scarlet-crested black woodpecker, are observed. Journeying onward along the banks of the Susquehannah, hemmed in on every side by the mountains, they cross at Keeler's ferry, and continue upon the opposite bank. Beyond Tuckhannock creek, they put up at a miserable dwelling without a door and prepare their own meal of game and bread. After jotting down the incidents of the day, Wilson enquires:

"'What Township's this, old daddy?' 'Why—hm—well;
Township? The dickens, Sir, if I can tell;
It's Pennsylvania, though? 'Right, Daddy Squares.
Who are your nearest neighbors?' 'Why, the bears.'
'No mill or school-house near you?' 'Yes, we've one
Beyond the church a piece, on Panther's Run.'
'Is church far distant, daddy?' 'Why—hm—no;
Down Susquehanna, twenty miles or so.'
'You go to preaching, then?' 'Be sure, that's clear.

We go to mill and meeting twice a-year.'
'No curiosities about?' 'Why—yes,
You've brought a few of them yourselves, I guess.'
'What, dollars?' 'Aye, and fi' pennybits, I swear.'"

Once more emerging from the woods, a settlement at the Narrows, at Athens, and then up the Tioga river to Newtown. A little beyond the latter place water may be turned into the Chesapeake, or the St. Lawrence by the way of Catherine creek. Forests of enormous walnuts and sugar maples, some of the former trees measuring thirty feet in circumferance, are seen in the vicinity of the Great Catherine's swamp. Wilson induced two striplings to paddle their canoe down a clear deep stream to Seneca lake and temporarily parting from his companions, prepared for a few hours gunning, his comrades trudging along the shore.

There sits the hawk, inured to feasts of blood,
Watching the scaly tenants of the flood.
. . . . . .

Slow round an opening we softly steal,
Where four large ducks in playful circles wheel:
The far-famed canvass-backs at once we know
Their broad flat bodies wrapt in pencilled snow;
The burnished chestnut o'er their necks then shone,
Spread deepening round each breast a sable zone.
. . . . . .

O'er the flat marsh we mark the plover's sweep,
And clustering close, their wheeling courses keep,
Till, like a tempest, as they past us roar:
Whole crowds descend to rise again no more.
. . . . . .

There on the slaty shore, my spoils I spread,
Ducks, plover, teal, the dying and the dead;
Two snow-white storks, a crane of tawny hue,
Stretched their long necks amid the slaughtered crew;
A hawk whose claws, white tail, and dappled breast,
And eye, his royal pedigree confest;
Snipes, splendid summer-ducks, and divers wild,
In one high heap triumphantly I piled.

In a footnote, Wilson remarks that the "fishing hawk or osprey" differs considerably from the European forms, and that the celebrated canvasback appears to be the *Anas ferina* of Linnæus, an opinion he afterward retracts. The "black duck *Anas perspillata (sic)*, very numerous," is probably not *Oidemi perspicillata*, Surf Scoter or Black Duck, but *Anas rubripes*, Dusky or Black Duck. The "snow-white storks" most certainly were not the "*Ardea alba*" of Linnæus, as he seems to think, nor is it plain what species they might be. The "chane" is probably *Ardea herodias*, Great Blue Heron and he identifies the "hawk of royal pedigree" as the "white-tailed eagle (*falco fulvus*), so much sought after by the Indians of North America, for its quill and tail feathers, with which they plume their arrows, ornament their calumet and adorn their dresses."—The Golden Eagle? Wilson walked ten long miles, heavy laden, before locating his party, and darkness coming on, they were alarmed by the howling of a wolf and the screaming of a panther; but guided by the light of burning brush in a settler's clearing, reached friends by midnight. The next day a skiff was launched in Cayuga lake and by night a landing made at the cabin of an absent trapper, the good wife making them welcome. The Indian's lament and Wilson's description of their encampment is excellent. Floating down the Oswego to the fort at its mouth, they boarded a sloop on Lake Ontario, bound for Queenstown on the Canadian side of the Niagara River, seven miles below the Falls and landing, eagerly pushed forward. It had been stated that the roar of the cataract could be heard for upward of forty miles, while actually the distance depended upon the condition of atmosphere and direction of the wind, Wilson's illustration of this is homely and graphic.

"Up to the Ridge's top, high winding led,
There on a flat, dry plain, we gaily tread;
And stop, and list, with throbbing hearts to hear
The long expected cataract meet the ear;
But list in vain. Though five short miles ahead,
All sound was hushed and every whisper dead.
'Tis strange,' said Duncan, 'here the sound might reach.'

'Tis all an April err,' and answered Leech.
'Men to make books a thousand tales devise,
And nineteen-twentieths are a pack of lies.
Here, three long weeks by storms and famine beat,
With sore-bruised backs, and lame and blistered feet;
Here nameless hardships, griefs and miseries past,
We find some mill-dam for our pains at last.'

. . . . . .

Heavy and slow, increasing on the ear,
Deep through the woods a rising storm we hear;

. . . . . .

Yet the blue heavens displayed their clearest sky,
And dead below the silent forests lie;
And not a breath the slightest leaf assailed,
But all around tranquility prevailed.
'What noise is that?' we ask, with anxious mien,
A dull salt-driver passing with his team.
'Noise! noise! — why nothing that I hear or see,
But N'agra falls — Pray, whereabouts live ye?'
All look amazed! yet not untouched with fear,
Like those who first the battles thunders hear,
'Till Duncan said, with grave satiric glee,
'Lord, what a monster mill-dam that must be!'"

Wilson views the stupendous cataract with awe and his pen picture of the Bald Eagles floating in the sky above the mad waters, Ord pronounces poetical and sublime:

"High o'er the watery uproar, silent seen,
Sailing sedate, in majesty serene.
Now 'midst the pillared spray sublimely lost,
And now emerging, down the rapids tost,
Swept the gray eagles; gazing calm and slow,
On all the horrors of the gulf below;
Intent, alone, to sate themselves with blood,
From the torn victims of the raging flood."

Wilson attempted to sketch the falls, but owing to the unfavorable weather during his short stay, it was not completed and subsequent engagements prevented him from returning as he had designed to do. The two drawings were finished by Sutcliffe, engraved by George Cook of London, and published in the Port Folio to illustrate "The Foresters." The return was

by a different route. Parting with Duncan, who returned to the farm via. Aurora, on the shores of the Cayuga, on the 20th of November, Wilson and Leech lodged at the outlet of Owasco lake after wading in the cold stream and washing their boots and pantaloons. At five o'clock the next morning the journey was resumed past the outlet of Skaneateles lake, Onondago Hollow, to Manlius Square, Wilson falling insensibly into a hard step, Isaac groaning a rod or two behind. Wading knee deep in snow or worse in mud, the former singing to drown the latter's complaints and execrations against the vile roads, they left Oneida Castle and Utica behind, following the valley of the Mohawk to within fifteen miles of Schenectady, where Leech took the boat. At the latter place they took the stage to Albany. Wilson's boots were reduced to legs and uppers. New York was reached in a sloop via the Hudson, and he reached home penniless on the 7th of December, having walked forty-seven miles the last day, and traveled upward of twelve hundred miles in two months.

About the time his Foresters appeared in the Portfolio in 1809, several prose articles appeared from his pen, signed "W." They were entitled: "On the Study of Natural History, No. 1." Vol. I, June, pp. 511-513; "Queries Respecting the Cowper-Finch of North America," Vol. II, July, pp. 61-62; "The Naturalist, No. III, [Article on the Milkweed], August, pp. 119-123; "Answer to the Queries in last Relating to the Cowpen-finch of North America," August, pp. 151-152; and "No. IV, Observations on the Nighthawk and Whippoorwill of the United States," Sept. pp. 197-199. His "Invitation," "The Solitary Tutor" and "A Rural Walk" contain a great deal of nature. In his Scottish verses, with the single exception of "The Disconsolate Wren," he only incidently mentions the birds: but in America he frequently devotes whole poems to a single species, as the "Hummingbird," "The Tyrant Flycatcher, or Kingbird," "The Baltimore Bird," "The Fish Hawk, or Osprey," and the best of all "The American Bluebird"; most of which appeared in his American Ornithology and is accessible to all. Doubtless had the poetry proved ac-

ceptable to the general reader, more would have been produced, though science and poetry are scarcely in accord. Coues is responsible for the following: "The tradition runs, that Wilson asked Major L—, (a distinguished naturalist) how he liked the work; the latter replied that he liked it, 'all but the poetry;' and Wilson seems to have taken the hint." His poetry lacks imagination, expression, smoothness and finish. Science and poetry are scarcely accordant and Wilson's faculties were eminently fitted for exactness rather than fancy. Someone has writen that his poetry is remarkable for its dreary prosaism, and his prose for its poetry; a remark more witty than true perhaps; but after all, Ord's estimate of the comparatively small value of his friend's poetical attempts, and Dr. Wilson's recent scholarly criticisms and his final opinion that only the claims that the few good poems can establish for him, give us any right to call him a poet at all, are more in accord with the general verdict, than Grosart's unstinted praise; and it is a pleasure to know that a great poet was not lost in the ornithologist, and that the minor poet found expression in prose and his great scientific services dwarfed all else. Seldom has opportunity been grasped with the strength and energy of Alexander Wilson.

ADDENDA

Through the kindness of Mr. W. Lee Chambers I am enabled to cite the title of another Jardine edition of Wilson — the one referred to by Grosart:

American Ornithology |or| The Natural History |of the| Birds of the United States |by| Alexander Wilson |and| Prince Charles Lucian Bonaparte| The Illustrative Notes and Life of Wilson| by Sir William Jardine, Bart., F.R.S.E., F.L.S. |[Woodcut]| In three volumes—Vol. I. [—III]. |London| Chatto and Windus, Piccadilly| 1876.

This edition printed by Ballantyne & Company — Edin. & London — on large paper, 8½ by 11 inches; otherwise the same as the Cassell, Petter & Galpin edition (h), excepting the plates, which are hand-colored instead of printed in colors. The coloring is almost as good as the original edition.

Also another Brewer edition, practically the same as (m), but with the impring T. L. Magagnos & Company, New York, 1854, 16 Beekman St., as publishers. It also contains a few plates not from Wilson.

I have recently had the very great pleasure of examining valuable manuscript relating to Wilson, collected by the late Joseph M. Wade, and now in the hands of Mr. Frederic B. McKechine, who, while reserving the bulk for future publication, has kindly permitted me to quote certain portions of the Hazard and Lawson letters. It enables me to confirm the existence of a Philadelphia edition of Brewer's Wilson, 1856, by quoting the publisher: "My connection with Wilson was this: As a publisher in Philadelphia, Harrison Hall who had formerly been the publisher of Wilson in 3 Vols. 8vo of text and 1 Vol. 4vo of plates [1828-1829[, who succeeded Laval and Bradford, the former publishers [Vol. IX of the 1824-25 reprint]. He used frequently to be in my store on Chestnut St. between 7th and 8th Sts., and being a very old man, and desiring of selling the plates, induced me to buy the coppers, which were all he had of the work, except a number of odd printed impressions, plain and colored, and a few copies of the edition of Wilson and Bonaparte in 1 Vol. 8vo edited by Brewer of Boston, and which was out of print. I used to buy all the copies of this letter press I could pick up, and print off some plates and color them and thus sell the work. When I went out of business, I sold the plates to Porter and Coates."[1] The latter publishing house made use of them in their 1871 edition, when Mr. Hazard was manager for the firm and doubtless superintended this work, and the late Henry T. Coates informed me that he in turn transferred the plates to The John C. Winston Co., successors to Henry T. Coates and Company; therefore I believe the original coppers are still intact after serving five editions. Mr. Hazard does not state that the title page of the letter press was replaced by one of his own, but I regard this as extremely probable, as well as his own or a close friend's authorship of the notice in Alli-

[1] Willis P. Hazard MS.

bone's Critical Dictionary of English Literature; otherwise the few sets of this pseudo-edition sold at retail from his bookstore would scarcely have attracted attention outside of his immediate neighborhood. The price of the work does not appear and it received no reviews.

To my list of portraits I would append a photographic reproduction of the Gordon painting or the original picture in the possession of Wilson's sister.

Chamber's British Science — Biographies <Natural History by H. Allyn Nicholson, M.D., D.Sc., (1886); 122, half length.

The Public Ledger of Philadelphia, May 7, 1890, p. 3, contains a notice by Thompson Westcott of the presentation by Mr. James N. Stone to the Academy of Natural Sciences, of some of Wilson's letters to Bartram, Bradford and Abbott, all of which have since been published; a hitherto unpublished letter of Waterton's to Ord, chiefly referring to an incident on the Mediterranean in which it appears Prince Charles Bonaparte saved the writer from a watery grave. Westcott also announces the receipt from the same source, of the pencil drawing of Wilson "probably by Joseph B. Ord." The authorship of the portrait cannot be ascertained, however. It is not at all probable that the son of George Ord was the artist. Ord was unmarried until some time after Wilson's death and it is not until 1838 that he writes from England that his son has entered the atelier of Barron Gres as a student of painting. Had the elder Ord possessed the talent for drawing the human countenance, it would certainly be like him to leave it unsigned. Miss Malvina Lawson makes mention of a copy in her possession of a profile, cut out of paper in the old style, taken from the one in Peale's museum.[1] This silhouette may or may not be the original, or an outline copy of the drawing.

Neither is the exact date of the Barralet portrait positively known. Miss Lawson could not be certain, but she thought the drawing was made after Wilson's death, and thin, as he always was, of course death from a wasting disease reduced him terribly. Her father said the portrait did not do Wilson

[1] Malvina Lawson MS.

justice, although it gave some idea of him. Hazard states that the stipple engraving on copper was published in November, 1814; and as it was done by Barralet himself, it is probable that the date of the death of this artist-engraver, "about 1812," was placed too early by his biographer.

The portrait in Potter's Monthly, 1875, a coarse repoduction by the photo-electric process, was from Barralet's original engraving in the possession of Mr. Hazard, and the woodcut in Webber's Romance of Sporting, 1852, a crude reverse from the same source, Miss Lawson wrote in criticism: "The outline of the face, in the forehead and nose, is the same as Barralet's, from which it is evidently taken; the mouth and chin are certainly wrong. Wilson's temperament was pure bilious, and pouting lips are unknown to that temperament, even in early life. . The dress alone would mark its want of truthfulness."

A rather clever bit of plagiarism, amusing to all but the editors whom it deceived, was perpetrated by some one in a newspaper. It included the second, seventh and ninth stanzas of Robert Burns' well known poem "Elegy of Capt. Matthew Henderson." Beginning with the third line of the second stanza, the only substitution in the text was that of "Wilson" for "Matthew." Mr. Hazard wrote a sketch of Wilson's life for the last Porter and Coates edition of Griswold's Prose Writers of America, and included this "Elegy of Alexander Wilson" in all innocence: and later, Mr. Wade was taken in (Ornithologist and Oologist, 1883, p. 39) even to the extent of stating that the author was unknown!

In conclusion I wish to state that I am indebted to Mr. Witmer Stone for criticism of my IV paper before it went to press, to Mr. Ernest Spoffard of the Pennsylvania Historical Society for his kind assistance, and Messrs. Alfred C. Redfield and Ernest W. Vickers for photographs; in addition to the gentlemen already mentioned.

ERRATA.

In my key for the identification of the reprint and the original editions (Wilson Bulletin, No. 69, p. 178) "*Oriolus*

baltimorus" and "*Oriolus baltimore*" should be transposed; and I would add that in the later copies or second edition (1809) of the initial volume, it is identical with the reprint (1824). Bonaparte employed the second edition of the first volume as reference in preparing that part of his Observations on the Nomenclature of Wilson's Ornithology.

Dr. Walter Faxon writes me as follows: "I notice you repeat the statement [Wilson Bulletin, No. 68, p. 140] made, I think, by Coues [Proc. Boston Soc., XII, 1868, p. 106; and Birds of the Colorado Valley, 1878, pp. 24 and 34], by J. A. Allen [Bull. Mus. Comp. Zool., II, 1870-71, pp. 251 and 254], and by Ridgway [Birds of North and Central America, 1907, 49 and 56; also Baird, Birds, 1858, 209], that Wilson's figure of the Hermit Thrush is in reality the Olive-backed Thrush. This is an error — due to the faulty coloration of Wilson's published plates. I possess the original colored drawing of Wilson, from which Lawson engraved it. It is a Hermit Thrush. If you scrutinize the figure in the *original* edition, you will perceive that there was an attempt to display the rufus tail of the *Hermit*, but that the pigment was obscured by the underlying black engraved lines or by some other cause."

THE BIRDS OF CEDAR POINT AND VICINITY.

BY LYNDS JONES.

167. *Peucaea aestivalis bachmanii.*—Bachman's Sparrow.

A bird believed to be the same one was listened to and seen at close rance on May 14 and 17, 1909, on the sand spit at the eastern extremity of the telephone line. The bird was first seen on the wires where it was singing lustily, at intervals making short excursions to the ground and bushes for food, always returning to nearly the same spot and taking up its wonderfully beautiful song. I made determined efforts to secure the specimen on both occasions, but its good angel intervened. The pattern is sufficiently distinct and the song so unique that there should be no more room for doubt of the identification than with the other familiar sparrows. It was not found on May 22, when I again visited the place. One might well be pardoned for departing from the strictly scientific method in an attempt to describe the song of this sparrow — but I shall not attempt it.

168. *Melospiza melodia.*—Song Sparrow.

Abundant during the migrations, common all summer, and found in considerable numbers all winter in all brushy and weedy places. It is one of our most characteristic birds. It bursts into song on any bright day in winter, and sings imperfectly during the fall months. The migrants appear in the second wave of migration, usually just before the middle of March, and the bulk have gone south about the time of the first hard frosts, in October. In winter it selects sheltered places, such as brush piles, weeds and grassy fields and tangles, and often spends the night in hay mows or in straw or stalk stacks. It has been found in some numbers on every trip to Cedar Point, even in the severest weather. When the marshes are frozen it ranges everywhere over the marsh in the dry vegetation.

169. *Melospiza lincolni.*—Lincoln's Sparrow.

A fairly regular spring migrant, not thus far noted in fall. The median date of arrival is May 11, and of departure May 17. It often sings during its stay, but the song is weak and delivered from a low perch, not attracting attention. A typical habitat is the brushy border which fringes the marsh side of the sand spit. On the mainland it is most often met with in the bushes bordering a small stream, whether in the deeper woods or elsewhere. It also frequents the low, wet areas of woods where there is brush. In habits it may be distinguished from the Song Sparrow, which it resembles, by its skulking habits and timidity. The breast streaks are finer and darker.

170. *Melospiza georgiana.*—Swamp Sparrow.

Usually common during both migrations in the Cedar Point marshes, but no positive summer records in any part of the region have yet been secured. It is also often common during the spring migration in low, brushy places anywhere. It sings only in pleasant weather. Observations at Cedar Point have necessarily been largely confined to the borders of the marsh, but there are reliable indications that many individuals spend their time among the vegetation in the more densely grown areas of the marsh. The median date of arrival at Oberlin is April 21, at Cedar Point, March 19. The birds arrive from the north about October first, become common in a week and remain common until the third week of October. My last record is November 26, 1906, at Cedar Point. In the marsh these birds are found in nearly the same situations as the Long-billed Marsh Wren, except that they are more often seen in the fringe of brush along the shore. They are often mistaken for the Wrens by the unwary observer, partly because their song bears some resemblance to the Wren's song. It is so difficult to make one's way in the marsh in summer that I have so far failed to penetrate to the recesses where nesting birds might be concealed. I am inclined to think that a few pairs breed in the marsh. Song and Swamp Sparrows are often found in the same situations in spring, when they may be readily distinguished by the more mouse-like actions of the Swamp, besides the shorter tail and lack of streaking beneath.

171. *Passerella iliaca.*—Fox Sparrow.

Often common during the spring migrations, but never more than scattering during the fall migration. Its typical habitat while it is with us is brushy places, either borders of woods, second growth, or even among the scattered brush cut from trees recently felled, especially if the cutting has left open spaces in the woods. It is also found in some numbers along hedge rows and neglected fence lines. The fringing brush of the sand spit is a typical habitat, and it is found there in rather more numbers than elsewhere. My records indicate that it is likely to reach the sand spit rather earlier than the Oberlin quadrangle, perhaps a week earlier. The median date of arrival for all records is March 20. The earliest record is March 9, 1908, at Cedar Point. The birds leave for the north about April 20 (May 2, 1907), and return about the middle of October (October 2, 1901), and leave at the first touch of winter, usually the first week in November. Fox Sparrows are found with other brush-loving sparrows, but I have never seen flocks of them, rather scattered companies. They sing lustily on bright days. I have often seen them feeding with Towhees.

172. *Pipilo erythrophthalmus.*—Towhee.

Common everywhere in woods from late March or early April to the first week in October (October 15, 1906), a few remain all winter. On the Cedar Point sand spit it is abundant during the spring migration, but not more than half a dozen pairs breed there, and those in the woods and thickets west of the resort grounds. The Towhees form a part of the second migration wave, which sweeps through about the middle of March (March 6, 1899, March 22, 1901). My latest record in fall is November 4, 1907. All but the few winter birds have usually gone south by the beginning of the last week in October. The males which stay all winter sing on warm days in late February. A bright colored male spent the winter of 1902-3 in the arbor vitae hedge which borders the Second Congregational yard on two sides. This is across the street from a business house — really in the heart of town. It was heard singing faintly nearly every day during the winter, usually from deep in the hedge. I was surprised not to find the Towhee on any of the islands visited, not even Put-in-Bay nor Pelee, both of which abound in typical habitats. This may account for its small numbers on Point Pelee, as noted by Taverner and Swales. I have twice found nests of this bird in open pastures more than ten rods from any brush or woods, but such pastures were recently cleared woodland.

173. *Cardinalis cardinalis.*—Cardinal.

The story of the Cardinal in the region is one of gradually increasing numbers for the thirty years of record available to me. Prior to 1890 it was practically confined to the river gorges, where it had increased to tolerably common locally, but was not known in the towns. To all but the initiated it was regarded as a stranger. It gradually spread from the river gorges over the wooded parts of the region generally, a pair or two at most being recorded for any upland woods. In 1898 three pairs nested in Oberlin, and nearly every brushy woods harbored a pair or more, except that it seemed to be absent in any woods within a mile of the lake. In 1901, on a trip to the islands with Mr. W. L. Dawson, it was recorded on East Sister, but was not noted elsewhere. It was again noted on East Sister in August, 1904. During a stay of three days (August 29 to September 1st), in 1905, on Pelee Island, the Cardinal was found to be one of the characteristic birds there. Subsequent trips to Pelee Island and to other islands indicate that this bird is still increasing in numbers and extending its range. There has never been the slightest indication of a migration movement. Usually the birds are well scattered over the whole region, but occasionally,

particularly in late winter, considerable gatherings of them may be found. Thus, I have seen as many as 22 individuals in a small red cedar thicket a half mile north-east of "Mill Hollow," in the Vermilion quadrangle.

174. *Zamelodia ludoriciana.*—Rose-breasted Grosbeak.

Common from about the first of May until the middle of July, in the borders of woods. The median date of arrival is May 2. The latest record in fall is September 14, 1906, when two immature birds were recorded. The males arrive some days before the females, usually, and when they outnumber the males they become the aggressors in courtship. The males have been found on the nest, during the incubation period, much oftener than have the females. During the breeding period the typical habitat is a shrubby woods, such as a second growth ten years after the cutting, or a willowy border of a swampy woods. Cedar Point seems to offer several typical habitats, but the birds have been found there only during the spring migrations. While the birds are courting they spend much time in the taller trees within the woods. Both Put-in-Bay and Pelee islands seem to have suitable habitats, but I have not found the Grosbeak on them, possibly because my visits have been too late in the summer.

175. *Passerina cyanea.*—Indigo Bunting.

Common over the whole region, including the larger islands, in brushy areas. The sand spit is a typical habitat, and here the birds are found in great numbers, nesting in the bushes and shrubbery. Of course they are not present in the immediate vicinity of pleasure resort grounds. On the mainland they are sure to be found in the brushy and shrubby borders of all woods. Nests are placed in thickets, whether of bushes, briars, or rank weeds. The males sing most during the warmer weather and the warmer parts of the day. The median date of arrival is May 6. The bulk arrives a few days after the first is seen, and the birds remain common until the end of the third week of September. My latest record is October 9, 1897. This is one of the species which helps form the great wave of migration in spring. I have not noticed any distinct fall movement of birds from farther north.

176. *Spiza americana.*—Dickcissel.

The career of this bird in the region is a checkered one. In a manuscript of the birds about Oberlin by Messrs. L. M. McCormick and G. D. Wilder, completed in 1892, its occurrence is given as casual during the previous thirty years. Its capture anywhere was considered worthy of notice. During the summers of 1894, 1895, and 1896, I have noted it as common about Oberlin. None

were seen the next two summers, and in 1899 but one nesting pair was found, and that west of Elyria. None were found in 1900. In 1901 one was recorded on July 1, 15 and 19, and three on July 22, all near Oak Point. It was wholly absent in 1902 and 1903. In 1904 two were found on May 9, and one on May 12, near Oak Point. It was absent in 1905 and 1906. In 1907 five singing individuals were noted in a field a mile west of Huron, where they appeared to be nesting. In 1908 one was found at the same place on June 1. There were none in 1909. The Dickcissel could hardly have occurred in the region until considerable clearings appeared in the primeval forest, unless it found suitable habitats in the vicinity of Sandusky, since it is a bird of the open country. It prefers fields in which, or near which, there are a few scattering trees to which it may fly when it sings, but a convenient telephone or telegraph line will serve, or even a wire fence if necessary. The reasons for its fluctuations cannot be even hinted at with the data at hand.

177. *Piranga erythromelas.* —Scarlet Tanager.

Common in woods from about the first of May until the first of September. The median date of arrival is May 1. It thus is among the leaders of the van of the great migration wave. The last fall record is October 2, 1901. It is a common migrant at Cedar Point, and three were recorded at the Lake Laboratory during the summer of 1908. Several were always noted in the woods west of the resort grounds. I have not recorded it from any of the islnads, but it undoubtedly nests on the larger islands which have considerable growths of woods. One pair nests upon the Oberlin College campus pretty regularly. The typical nesting habitat is a mixed deciduous woods of moderate density. I have found nests near the border of such woods more often than elsewhere.

178. *Progne subis.*—Purple Martin.

Only scattered colonies of Martins remain to remind us of the much greater numbers which inhabited the region in earlier years. The largest colony known to the writer is one in the city of Sandusky. From this center birds fly out in every direction, mingling with the swallows over the harbor, marsh, and sand spit, and even out over the lake. The individuals which may be seen from the Lake Laboratory could be easily counted at any time, but the almost constant presence of the birds in the air during the day inclines one to the use of the term "common" for indicating the relative abundance of the species. In the Oberlin and Vermilion quadrangles the colonies are small and few. Some individuals would be seen during any outdoor study of an hour or more, in practically any region. I know of no colonies except in towns or

settlements. The median date of arrival is April 10, and the latest fall record is September 30, 1907. The Martins leave the vicinity of their breeding places before the first of August. A roost of several hundred was studied on North Harbor island August 8, 1901, and a great migration from Pelee island across to Marblehead, August 31 and September 1, 1905. On September 1 the migration stream was followed southward past Middle to Kelley's island, where the birds were gathering in clouds preparatory to roosting in the woods near the west end of the island. At twilight they were whirling above the woods in a mighty maelstrom, the vortex of which was over the woods and the spreading top covering the entire island. Arrivals from the direction of Pelee island were continually swelling the host. The maelstrom form had not changed when darkness settled down, making further study impracticable. On August 29, at Pelee island, the Martins were passing at the rate of five a minute from 4:20 p. m. until as late as 9 p. m. With them were groups of Barn, Cliff, Bank, and Rough-winged Swallows, and an occasional Chimney Swift. The wind was west-south-west, brisk, and all of the birds were headed nearly due south-west, or toward Put-in-Bay island rather than toward Middle or Kelley's; but all invariably drifted south so that they passed either over or to leaward of Middle. On August 30, an early morning thunder storm apparently checked a migration which had barely started. After the storm scattered flocks of Martins and Barn Swallows passed over the course of the previous day. At 4:30 p. m. the flight began again and continued well into the night. Swallows were more numerous and moved more directly south without side excursions after insects, and faster. They seemed nervous and somewhat anxious. A flock of Red-winged Blackbirds passed southward over the course, and occasional Nighthawks drifted southward as they fed. On September 2, when the Martins were again migrating in considerable numbers, we sailed eastward into the lake, passing between Kelley's island and Marblehead, where birds were crossing southward, then out eastward, reaching Vermilion at dark. We thus crossed any line of flight from Point Pelee to the mainland in a direct line, but no birds were seen crossing except between Kelley's and Marblehead. It seems to me significant that all of the migrating Martins passed down the east side of Pelee island. We found no evidence of a roost on the island. The most of them were not above 300 feet above the lake, except when they were circling over Kelley's island.

179. *Petrochelidon lunifrons.*—Cliff Swallow.

It is listed as a common summer resident by McCormick and Wilder (MS.), which applies to conditions prior to 1890. There

are two nesting colonies in the Oberlin quadrangle. During the migrations a few individuals are seen with groups of swallows, especially along the lake shore. I am unable to suggest the reason for this rapid decrease in numbers. The old barns where they used to nest are still standing, and conditions for breeding seem to be favorable. English Sparrows have not yet invaded the nesting places to any destructive extent. The median date of spring arrival is April 26; the latest fall record is September 23, 1907. Cliff Swallows are too few to accurately determine their relations to the other swallows in their fall grouping just preceding the southward migration. Occasionally they seem to flock with other swallows.

180. *Hirundo erythrogaster.*—Barn Swallow.

Everywhere common except in woods. Nests are built in any available building, or even under bridges. I have never found it nesting among the shale cliffs, nor about sandstone ledges. From its nesting places it sallies forth over the fields and meadows in search of food. It is also regularly seen in the river gorges flying up and down the stream courses. The median date of spring migration is April 11. It usually remains common in the vicinity of its nesting places until late August, after which it forms great companies in the vicinity of the swamps, passing the night on telegraph wires or other similar perches, before winging southward. Mention has already been made of the flights of this swallow accompanying the Martin fall migration flights. Such birds must be those which have nested well north. Barn Swallows remain in the vicinity of Oberlin until the last of September (October 15, 1906). None have been known to nest anywhere along the Cedar Point sand spit, because there is no suitable place, but numbers are seen flying up and down the lake shore and over the harbor.

181. *Iridoprocne bicolor.*—Tree Swallow.

Scarce everywhere except along the Cedar Point sand spit, where it nests in the trees not far from the mouth of Black Channel, easterly. It is regularly recorded during the spring migrations about Oberlin, especially at the Water Works reservoir, but never more than three or four individuals at a time. After the breeding season, during late July, I have seen great companies gathering to roost in the swamp vegetation east of the mouth of Black Channel. They formed the characteristic funnel group before finally settling into the vegetation for the night. In the morning they often disperse over the marsh, many alighting on the tops of cattails or other stiff marsh plants, before finally flying away. The median date of arrival is April 11, the earliest April 1, 1908. The latest fall record is October 22, 1906. This swallow was noted among the islands, but there was no direct evidence of nesting on any island. How-

ever, all trips have been too late in the season to coincide with the nesting period. I know of no nestings in bird boxes in this region.

182. *Riparia riparia.*—Bank Swallow.

Common wherever there are banks of earth suitable for nest holes. The banks facing the lake are the favorite places, but the banks of streams, or even of railroad cuts are utilized. During the spring migration and after the young have left the nest these swallows are more widely distributed over the country, often feeding over meadows and pastures at some distance from water. During the spring migration numbers visit the Oberlin Water Works reservoir almost daily. In the fall they gather in great numbers on the telegraph wires, associating with Barn and Tree Swallows, but usually flying in companies by themselves. The median date of spring arrival is April 22, the earliest being April 6, 1902. They are usually common, but gathered into large companies near the lake until the middle of August. A few linger well into September (October 7, 1907). There are no suitable nesting places on the sand spit, and very few on any of the islands, except Kelley's, yet numbers are seen flying about over the lake in the vicinity of the islands all summer. Mention has already been made of the migraitons accompanying those of the Purple Martins.

183. *Stelgidopteryx serripennis.*—Rough-winged Swallow.

Common along the river gorges, where it nests among the shale cliffs, and often noted about large stone culverts, where it was evidently nesting. Individuals are generally seen in groups composed of most of the other swallows which hawk up and down the lake beach. This swallow may be readily distinguished by its manner of flight, by its note or song, and by its dirty grayish underparts. It has been reported as sometimes nesting with the Banks, but I have seen no evidence of this. The median date of arrival is April 23, and the latest fall record is September 23, 1907. Mill Hollow, a horse-shoe bend of Vermilion River, with a large area of exposed shale surface, was a favorite nesting place of this swallow until the English Sparrows emigrated to it and preëmpted all of the available clefts which were the rightful homes of the swallows. There are practically no swallows there now. If it had not been a human settlement the sparrows would probably not have found lodgement in the shale cliff.

184. *Bombycilla cedrorum.*—Cedar Waxwing.

Tolerably common over the whole region, including the larger islands, in larger numbers and more constant at Cedar Point than elsewhere. No nests have been found near the Lake Laboratory, but there can be little doubt that the young are reared thereabouts.

On the mainland nests are usually made in orchards. The flocking habit persists even during the period of incubation, the unoccupied birds feeding together. Little damage is done to cherries in the region, because the birds are not sufficiently numerous to become noticeable in comparison with the Robins. In winter flocks are more frequently met in the large cemeteries than elsewhere except the natural cedar thickets, because cedars and other evergreens are more numerous there and furnish suitable habitats.

185. *Lanius borealis.*—Northern Shrike.

Of regular occurrence on the mainland. Extreme dates of occurrence are November 6, 1897, April 3, 1899. At best there are only a few individuals recorded during any winter, and most of those either within the stream gorges or in their vicinity. One occasionally finds its way into Oberlin, where it feeds upon the English Sparrows. Most of the quarry examined has proved to be Tree Sparrow, probably because this sparrow is the most numerous bird in winter, always excepting the English Sparrow. It is seen hovering over a field, much after the manner of the Sparrow Hawk, when it must be looking for small mammals. None have been noted in the vicinity of Cedar Point.

186. *Lanius ludovicianus migrans.*—Migrant Shrike.

A regular summer resident. Judging from the conditions in Russia Township there are about a dozen pairs in each township. With very few exceptions nests are placed in osage orange hedge rows, of which there remain considerable numbers in the region under consideration. I have not seen it nor evidences of its breeding on any of the islands. At Cedar Point it has been recorded during the spring migrations feeding along the sand spit. The median date of arrival for fourteen years is March 15, the earliest being March 2, 1901. My latest record is October 31, 1896. Recorded dates of occupied nests are March 30, April 11, 13, 14, 18, 20, 21, 22, and young, June 5. Nests are regularly destroyed by men and boys, on the plea that the birds kill chickens, and even young pigs and lambs, and that they are witches! The families remain together during the summer and early fall, when the old birds indulge in a good deal of singing.

187. *Vireosylva olivacea*—Red-eyed Vireo.

This is one of the characteristic woodland birds in summer. It is also characteristic of parks and door-yards in which trees and shrubbery are permitted to grow. One can hardly use the word abundant for this vireo, because were it not for the incessant singing it would not appear to be numerous. The song carries far and multiplies the effect. It is not less common on the Cedar Point

sand spit, for practically its whole length, and about the Lake Laboratory gives the impression of being abundant. It was found on all of the wooded islands, even Hen island, and North Harbor. The median date of arrival is April 30. My latest record is October 1, 1906. I have not found a nest of this vireo in the past ten years that did not have at least one egg of the Cowbird in it, and there are often two and even three. One young Cowbird in a nest is enough to cause the death of every young vireo. The earliest nest recorded is May 29, 1903.

188. *Vircosylva philadelphica.*—Philadelphia Vireo.

Not recorded until May 24, 1906, when two were captured at Ruggles Beach, east of Huron. On September 21 and 24 of the same year two were found near Oberlin. In 1907 four were found on the sand spit April 29, and on May 13 it was found there in uncountable numbers. The last one was recorded on May 27, and none in the fall. In 1908 it was recorded on May 11, 16, 18 and 20; 1 2, more than 10, and 1 respectively, all along the sand spit. The records for 1909 are May 6, 12, 14, 17 and 19; 1, 1, 2, 3, and 1 respectively. From these all too scanty records the Sandusky region would appear to contain a distinct migration route. My short experience with the bird in the spring migration indicates that it is a lover of the bushes and shrubbery which are characteristic of the borders of swamps, or the flood plain of small streams. Its habitat is thus distinctly different from that of any other vireo.

189. *Vircosylva gilva.*—Warbling Vireo.

Common in parks and about human habitations, but scarce in brushy wood from about May 1st to the middle of September. On the Cedar Point sand spit it is much more numerous east of the Lake Laboratory than west of it. The typical habitat seems to be an open woods with considerable under-brush, always remembering that in these days the vicinity of human habitations is preferred. The median date of arrival is April 27. My latest fall record is September 20, 1907.

190. *Lanivireo flavifrons.*—Yellow-throated Vireo.

Tolerably common in the heavier woods from the first week in May to the first of September. I found one about the middle of the sand spit on April 27, 1908, which is the only record for the sand spit. I did not find it on any of the islands. The typical habitat is a woods with slender but high trees, and with little or no underbrush. I have not found typical breeding places on any of the islands, and there are none on Cedar Point except the pleasure resort grounds. The median date of arrival is May 1. My latest fall date is September 21, 1906.

191. *Lanivireo solitarius.*—Blue-headed Vireo.

Usually fairly common during the spring migrations, but seldom seen in the fall. It is a woodland bird, occasionally seen in parks. It is found in much the same situations as the Yellow-throated, but inclines to feed nearer the ground, among the lower branches of the trees, or even in the underbrush. It does not sing much. I have found it in considerable numbers on the sand spit in the spring migrations, but none in the fall. The median date of spring arrival is April 29, and of departure May 16, the latest being May 25, 1909. The fall records are September 12, 1898; September 21, and October 5, 1906. All fall birds were singing.

192. *Vireo griseus.*—White-eyed Vireo.

One was seen about the middle of the sand spit on April 27 and captured there near the same place on May 4, 1908. Another one was well seen in a woods south of Oberlin on April 29, 1908. These birds were in the characteristic habitat for the species, the bushes along the margin of the marsh on the sand spit, and the brush fringe of the woods near Oberlin. These are all of the records for this vireo in the region.

193. *Mniotilta varia.*—Black and White Warbler.

Common during the spring migrations, but scarce in fall. A few pairs remain to breed in the river gorges in and near the evergreen growths. This warbler is found wherever there is any considerable growth of trees. Numbers are found every spring on the Oberlin College campus, and elsewhere about the town. The median date of spring arrival is April 29, and of departure of the bulk May 7. Most fall dates of last seen are in the last week of September. It was noted on East Sister island on August 28, 1905, and on Pelee island on August 29, 30, 31, and September 1 of the same year. Of course these birds were in migration. One was noted during the last week of July, 1907, in the vicinity of the Lake Laboratory, which may have bred on the sand spit; otherwise it is a common migrant all along the course of the sand spit.

194. *Protonotaria* citrea.—Prothonotary Warbler.

The only records are May 9 and 14, 1904, at Oak Point, one specimen on each date. The lagoon and its environs at Cedar Point furnish nearly typical breeding habitats.

195. *Helmitheros vermivorus.*—Worm-eating Warbler.

One near the east end of the sand spit in the bushes on the beach side, April 29, 1907. This is the only unquestionable record for the whole region. Unsubstantiated reports of the occurrence of others have come to me.

196. *Vermivora pinus.*—Blue-winged Warbler.

Locally common in swampy woods during the summer. I have looked for it in vain in the swampy woods within a mile of the lake shore, even in the migrations. The only Cedar Point record is April 27, 1908, when one was found a half mile east of the Lake Laboratory. What the influence is which keeps this warbler away from the vicinity of the lake where typical breeding habitats are more numerous than elsewhere I am unable to suggest. Of course it has not been found on any of the islands. The median date of arrival is April 29. Nests have been found May 19. My latest fall record is September 21, 1906.

197. *Vermivora chrysoptera.*—Golden-winged Warbler.

Irregular and scarce in the spring migrations. The first record is May 7, 1894. It was not again seen until May 6, 1901, and was five times recorded during that spring, the last date being May 16. On May 9 a pair was watched for a considerable time because they seemed to be getting ready to build a nest, but were not again seen. In 1902 one was seen May 4, and three May 5 and 7. In 1903, one May 11. 1904, one May 7. 1905, one May 17, and one May 23. 1906, one May 14. 1908, one May 11. All of these records are for the immediate vicinity of Oberlin, most of them in a wood one mile south of the town. All but one of the birds noted were in low second growth woods or the brushy border of larger woods, where water stands until June. It is hardly likely that this warbler nests anywhere in the region.

Vermivora leucobronchialis.—Brewster's Warbler.

Although this is regarded as a hybrid between the last two species, enough interest attaches to its distribution to warrant specific treatment here. It was first found in a thin woods just outside of the corporation limits of Oberlin, May 23, 1902, singing the half Blue-wing and half Golden-wing song. One was again closely studied in an adjoining woods on May 28, singing the same song. These two birds acted suspiciously like nesting birds, but prolonged watching failed to substantiate the suspicion. In 1903 the records are May 9, 12, 14, 16, 18, 19, all in the second growth part of the "South Woods," a mile south of Oberlin, one each time except the 12th, when two were captured. These birds were singing a mixed Blue-wing-Golden-wing song, and one was seen chasing a female Blue-wing. In 1904 one was seen on May 10, 11, and 12, in the woods in which the first one was found, but it was not singing. No more were seen until 1907, when one was studied at close range at the Lake Laboratory. The last record is for the old "South Woods," May 1, 1908, a singing bird. Three specimens captured and all of those noted and carefully studied were without any black on the

throat and with only a small patch of pale yellow on the breast. It seems to me a little singular that in the region where the Golden-wing is so scarce and so irregular, and where it clearly does not breed this supposedly hybrid form should prove almost equally regular and numerous. Why should its association, not only here, but elsewhere, invariably be with the Blue-wing rather than with the Golden-wing.

198. *Vermivora rubricapilla.*—Nashville Warbler.

Common during the spring migration, less common in fall. It is found ranging through all wood-lands, but less numerous in the deepest woods, and inclined to be more numerous in the shade trees in parks and about human habitations, and in orchards. It has been common on the Cedar Point sand spit each spring migration. I did not find it on any of the islands, except East Sister (Aug. 28, 1905), probably because my visits have been too early in the fall. The median date of spring arrival is April 30, and of spring departure May 21, the latest record being May 27, 1901. Fall records are few, but they indicate a fall arrival during the second week of September. My latest record is October 16, 1905.

199. *Vermivora celata.*—Orange-crowned Warbler.

A fairly regular but never a common migrant in spring; none noted in fall. It has been rather more common along the sand spit on the great days of migration than elsewhere. The median date of arrival is May 6, and of departure, May 19. The extremes are April 26, 1909, May 22, 1909. This warbler seems to prefer the brushy areas of rather open woods, feeding near and on the ground.

200. *Vermivora peregrina.*—Tennessee Warbler.

Common, sometimes abundant in the spring migrations, but usually scarce in the fall migrations. Comparing my experiences with this warbler in this region with those in central Iowa, where the birds were far more numerous in the fall than in the spring, I am naturally led to the conclusion that the presence of Lake Erie profoundly influences the southward movement. It was tolerably common on Pelee Island on August 29 to September 1, 1905, but was not found on the mainland that fall. It is more numerous in orchards and about human habitations than elsewhere in spring, but it may be found scattered through the woods during the height of the migration. It has always been found in numbers on the sand spit. The median spring dates are, for arrival, May 10, for departure, May 22. Extreme dates are May 4, 1899 and 1904, and May 29, 1903. Fall Oberlin quadrangle dates are September 16, 21, 26, and October 1. It was common September 16, 1898, but only one was recorded on each of the other dates.

201. *Compsothlypis americana usneae.*—Northern Parula Warbler.

It has been recorded every year since 1898, except 1905, always in small numbers, and only once in the fall, October 7, 1907, at Cedar Point. It is found in the higher woods, and is a frequent visitor to the Oberlin College campus, well up in the large trees which make the campus beautiful. It is also regular in small numbers on the Cedar Point sand spit in spring. Well authenticated nestings have been reported from various parts of the state, but there are no suitable nesting habitats in this region. The median date of spring arrival is May 6, and of departure, May 14; extreme dates being May 1, 1900, and May 24, 1909.

202. *Dendroica tigrina.*—Cape May Warbler.

While it is by no means common it is found regularly during the spring migrations. The typical habitats on the mainland are orchards and the lower branches of shade trees on lawns. I have also found it in the shrubbery of the sand spit east of the Lake Laboratory. There is a good deal of variation in the dates of spring arrival, probably largely owing to the scarcity of the species rather than to irregularity in the actual migrations of the species. The median date is May 11, and of departure, May 16. The extreme dates are May 4, 1899, and May 21, 1907. The only fall records are October 1, 1906, one immature at Oak Point, and September 23 and 30, 1907, one on each date, both at Cedar Point.

203. *Dendroica aestiva.*—Yellow Warbler.

Common all summer in orchards, the brushy borders of woods, and the bushes which border and grow in swamps and marshes. There are more individuals in the immediate vicinity of the lake shore than in areas of equal extent elsewhere because suitable habitats are more plentiful and of greater area there. It was common on all of the larger islands, but was not found anywhere in late August, 1905. It is common all summer along the whole extent of the sand spit, except only the pleasure resort grounds. It also ranges out into the marshes and nests in the scattering willows and button bushes which have found a foothold on the few ridges near Black Channel. Next to the Myrtle Warbler, this is the earliest to appear in spring. The median date of arrival is April 23. The earliest date is April 11, 1908. The birds are seldom common after July 25, and most have gone south by the middle of August. My latest record is September 13, 1907, at Cedar Point. My latest records for singing birds are August 6, 1898, and August 7, 1902.

204. *Dendroica caerulescens.*—Black-throated Blue Warbler.

Common during the spring migrations, in small numbers in fall. The habitat of this warbler is the lower branches of the trees and

shrubbery in woods. It is often seen feeding on the ground, usually at the roots of trees. It is a regular visitor to the Oberlin campus, and has been found plentifully distributed in the bushes and shrubbery on the sand spit. A few individuals were noted on Pelee island August 29 to September 1, 1905, and on Middle island on September 1, 1905. This is a full week earlier than the first fall records in the vicinity of Oberlin. The median date of spring arrival is May 4, and of departure, May 23; the extreme dates being April 27, 1896, and May 29, 1901. They usually arrive about September 10, and tarry until the first week in October.

205. *Dendroica coronata*.—Myrtle Warbler.

This is the first warbler to reach us in spring, the vanguard being made up of a few strongly colored males. The median date of spring arrival is April 20; of arrival of the bulk, April 29; of departure of the bulk, May 13; of last seen, May 16. Extreme dates of arrival and departure are April 12, 1904, and May 28, 1907. Fall arrivals may be expected about September 22, and a few birds tarry until the first touch of winter, which was November 2, 1899. It is often common during three weeks in October. This warbler is thus common during the spring migrations, when it is more often found in the woods than elsewhere, and may be common in fall, when it is more numerous in the fields than in the woods. In the spring it associates with other warblers and vireos, but in the fall with the smaller sparrows, particularly the Chipping Sparrow, and the Palm Warbler. It sings during each migration, but less forcefully in fall. It is a less frequent visitor to the Oberlin campus than many of the other warblers, but is common on the sand spit. I did not find it on any of the islands on the late August visit in 1905. The other visits were much too early. One was recorded in medium plumage at the Slate Cut, about midway of the marshes and a quarter mile south of the marshes, July 18, 1908. If this specimen represented a breeding pair it is the only instance of breeding known to the writer. It is more likely that it was a waif.

206. *Dendroica magnolia*.—Magnolia Warbler.

Common during the spring migrations, only irregular and few in the fall migrations. It was abundant all along the Cedar Point sand spit in the migrations of 1907. It is found in woods, particularly brushy woods, and is generally not far from the ground. It also visits the shrubbery and trees of lawns and parks and orchards. I found a juvenile on Middle Bass island August 26, 1905, and a full plumaged bird on East Sister two days later; also on Pelee island from August 29 to September 1, when it was fairly common. It was also present on Kelley's island on the 1st and 2d, but none were found on the mainland in the Vermilion and Oberlin

quadrangles during that fall (1905). The median spring dates are: for arrival, May 5; arrival of bulk, May 11; departure of bulk, May 18; last seen, May 22. Extreme spring dates are April 28, 1896, and May 28, 1908. The scattered fall records indicate that the birds arrive early in the second week of September and remain about a month (October 7, 1907).

208. *Dendroica caerulea.*—Cerulean Warbler.

Locally common during the summer in the taller woods, nesting in beech and maple trees. I have failed to find it in any of the seemingly suitable woods within two miles of Lake Erie, and have never found it anywhere on the Cedar Point sand spit, even in the migrations. I am unable to explain its absence near the lake. The median date of spring arrival is May 4. My latest fall record is September 21, 1906. On May 20 and 21, 1904, two individuals were noted singing on the Oberlin campus. I have never seen any indications of a marked southward movement in the fall, and doubt if there is any such fly line in the region.

208. *Dendroica pensylvanica.*—Chestnut-sided Warbler.

Common as a spring migrant, but hardly more than casual in the fall. This dainty little warbler regularly comes into the dooryards and orchards in town and often swarms in parks, and is as common in the woods. On May 13, 1907, when the greatest migration of small birds that I have ever witnessed was in full swing, this wrabler literally swarmed all over the Cedar Point sand spit from one end to the other. There was no estimating the numbers. The median date of arrival in spring is May 5, of departure, May 21; but it has arrived on May 2 four times, and May 3 and 4 once each. The only fall records are September 21, 1906, and September 30, 1907. In the first instance there were two birds in immature plumage, in the second ten individuals. There is no evidence that this warbler now nests within the region. If it ever did so the time must have preceded the disappearance of the pine and cedar woods bordering the mouths of the rivers.

209. *Dendroica castanea.*—Bay-breasted Warbler.

Regular and sometimes common during the spring migrations; regular, but seldom common, during the fall migrations. It is a woods-loving bird, but is often found in parks and about premises where there are fair-sized to large trees. It was common on the Cedar Point sand spit on May 13, 1907. I did not find it during the last week of August on any of the islands in 1905. The median date of arrival in spring is May 11, and of departure, May 20. My latest spring record is May 28, 1907. Fall records indicate that the first fall migrants appear about the first of September and re-

main nearly or quite a month. My latest fall record is October 2, 1901. The difficulty of positively distinguishing between this and the next in the fall plumage makes careful scrutiny necessary. In a good light and with strong glasses one may note the buffy of this species as against the yellowish of the next. In my experience the two species are about equal in numbers in the fall.

210. *Dendroica striata.*—Black-poll Warbler.

Regular and sometimes common in the spring migrations, seldom common in the fall. It is more strictly confined to the woods than the preceding species, seldom being seen in town and about residences. Birds in perfect breeding plumage are about in the proportion of one to four of those in the immature and female plumage, in the spring migration. Of course there are no breeding plumages in the fall. McCormick and Wilder give this warbler as common in the spring, abundant in the fall. They had no fall records of the Bay-breasted. It is likely that they confused the two species in the immature plumage and called all Black-poll. What they said about this species has never since been true at any rate. The median date of spring arrival is May 14, and of departure, May 24, but there were two singing on June 2, 1903, and one full plumaged male June 3, 1904. I found it on East Sister island on August 28, and on Middle and Kelley's islands on September 1st, 1905. Fall records indicate that it begins to migrate across the region about the first of September, and may tarry well into October (October 16, 1905). It was common on the sand spit May 13, 1907.

211. *Dendroica fusca.*—Blackburnian Warbler.

Common in the spring migrations, only twice recorded in the fall. It is common wherever there are trees of considerable size, being a familiar object in Oberlin during its spring sojourn. The median date of arrival is May 5, and of departure, May 21 (May 29, 1909). Fall records are September 24 three birds, October 15 one female, 1906. I have usually found it scarce along the sand spit, but on May 13, 1907, it was nearly abundant. I found it on Pelee island August 29 to September 1, 1905, but not on any of the other islands. It was in company with the several other migrating warblers near the south end of the point. It is unlikely that such a well marked species would be wholly overlooked if it occurred regularly in fall. It is perhaps significant that the two fall records given were for the Cedar Point sand spit. Since it is fairly common on Point Pelee during the fall migrations, according to Taverner and Swales, it must make the passage to the south somewhere in the island region. At least not many migrate southward through the Vermilion and Oberlin quadrangles.

212. *Dendroica virens.*—Black-throated Green Warbler.

Common during the spring migrations, scarce on the mainland but usually common at Cedar Point in the fall. There is good reason for believing that an occasional pair nests in the pine woods north of Elyria. I have seen a bird there during every week of the late spring and summer, and its actions betokened the presence of a nest or young. It is found everywhere that there are trees, and is therefore common all about Oberlin and in city parks as well as in the woods. The median date of spring arrival is April 29, of departure, May 20 (May 28, 1907). The birds return the first week in September and remain until October (Oct. 16, 1905). I found it on East Sister island on August 28, 1905, but nowhere else among the islands. It has been common in both migrations at the Cedar Point sand spit, much more so during the height of the migration season.

213. *Dendroica kirtlandi.*—Kirtland Warbler.

There are five records of this rare warbler, all for the Oberlin quadrangle, and all but one for the immediate vicinity of Oberlin. May 9, 1900, one was heard singing in the orchard bordering the Oberlin corporation line on the south, and on May 11 one heard singing in the "South Woods," and the one singing in the orchard where the first one was noted was captured to make identification certain. One singing male was found at Oak Point May 9, 1904. One singing male in the "South Woods," Oberlin, May 2, 1906. I have confidently expected to find this warbler on the Cedar Point sand spit, but have failed to so far.

214. *Dendroica vigorsi.*—Pine Warbler.

Records of this warbler are hardly more numerous than those of the last species, if those for 1908 are excluded. They are: April 29, one male, singing, at Oak Point; May 13, 1903; and from May 5 to 10 inclusive, 1908, one was seen and heard singing in pine and maple trees in Oberlin. It may be that the scarcity of pine woods in this vicinity is responsible for the few records. I am surprised that Taverner and Swales were not able to locate it on Point Pelee.

215. *Dendroica palmarum.*—Palm Warbler.

Common as a migrant, both spring and fall. In the spring it passes through in the brushy and tangle growths, seldom mounting into the trees, but in the fall it is seldom seen aywhere except in the fields and along fence rows bordering meadows. On the sand spit it ranges along the crest of the sandy beach and down to the water's edge, either in the bushes or among the grass. It seldom ventures into the bushy growth along the marsh. On the sand spit it is decidedly more numerous than on the maniland, and is even

more fearless. On the days of heavy migration, when other birds are also numerous, this warbler seems to start up from every bunch of grass all along the five miles or more of open beach. The median dates of spring migration are: for arrival, April 29, for departure, May 17 (May 22, 1909). Fall arrival, September 16; departure, October 5. It has always been in the most numbers late in September. I did not find it on any of the islands in 1905.

216. *Dendroica palmarum hypochrysea.*—Yellow Palm Warbler.

The only record for this eastern form of the Palm is that already reported in the Auk, IX, 1892, 397. The date was April 10, 1891, near Oberlin.

217. *Dendroica discolor.*—Prairie Warbler.

My records are few. The only time I have seen it in any numbers was May 13, 1907, all along the Cedar Point sand spit, on that greatest day of migration I have ever witnessed. Other records are April 29, 1899, May 14, 1903, May 9, 1904, May 2, 1906; May 11 to 20, 1907, May 11, 15, 16, 1908; May 11, 14, 17, 1909. I have never found it in fall. It has never been seen in the summer. Where did all those which were on the sand spit in 1907 go, since they did not put in an appearnce on Point Pelee? It hardly seems possible that so large a host could return southward to breed after the excitement of the migrations had died out. The typical habitat of this bird in the migrations is a low brushy border of woods. The small growth of bushes along the sandspit seems to form a congenial feeding place.

NOTES ON THE SANDHILL CRANE.

BY STEPHEN SARGENT VISHER.

The Sandhill crane (*grus mexicana* and *g. canadensis*) is one of the most conspicuous birds of the prairie region. Every farmer boy knows its call, and on fair days has seen large flocks soaring at great heights, slowly passing northward. Constantly their unsurpassed calls drift down to earth. When only a slight wind is blowing, these rich, bugle-like notes can be heard farther than the bird can be seen. Several times I have examined, for some moments in vain, the horizon before the authors sailed in view. On windy or rainy days, the flocks fly low nad swiftly in a direct line, and each individual croaks in turn. Thus slowly the music moves along the undulating, curving line.

The Sandhill crane feeds upon grasshoppers, frogs, worms and other life of the open, nearly all of which is considered harmful to man. While feeding they follow certain fixed rules. They always keep on open ground, either on an elevation or on an extensive flat. At least one of the group keeps watch while the others feed. This one stands still most of the time, with its head raised high in air and doesn't try to feed. Apparently there are shifts of watchers.

The mating habits of this bird are very interesting. In Sanborn County, South Dakota, I have often watched the mating dance; each time with increasing interest. In the early spring, just after break of dawn, the groups that were separated widely, for safety, during the night, begin flying towards the chosen dancing ground. These flocks of six or eight fly low and give constantly their famous, rolling call. The dancing ground that I knew best was situated on a large, low hill in the middle of a pasture of a section in extent. From this hill the surface of the ground for half a mile or more in every direction could be seen. As soon as two or three groups had reached this hill a curious dance commenced. Several raise their heads high in the air and walk around and around slowly. Suddenly the heads are lowered to the ground and the birds become great bouncing balls. Hopping high in the air, part of the time with raised wings, and part with dropping, they cross and recross each other's paths. Slowly the speed and wildness increases, and the hopping over each other, until it becomes a blurr. The croaking, which commenced only after the dancing became violent, has become a noice. The performance continues, increasing in speed, for a few minutes, and then rapidly dies completely out, only to start again upon the arrival of more recruits. By seven o'clock all have arrived, and then for an hour or so a number are constantly dancing. Occasionally the whole flock of two hundred or so break into a short spell of crazy skipping and hopping. By nine o'clock all are tired and the flock begins to break up into groups of from four to eight and these groups slowly feed to the windward, diverging slowly, or fly to some distance.

Just before nightfall the flock again convenes, but after a half hour or so of spasmodic dancing, groups fly silently away in different directions to grassy depressions, where they spend the night.

One pair nested in this vicinity and I was fortunate enough to find the simple nest. It was upon a slight rise in a large moist meadow. The two yellowish green, brown-spotted eggs were kept off the ground only by a few blades of grass.

EFFECTS OF WEATHER IN NORTH-EASTERN IOWA, SPRING, 1910.

BY ALTHEA R. SHERMAN.

The effect of weather conditions on bird movements this spring in north-eastern Iowa has been similar, no doubt, to that in other portions of the country. Here the average noon temperature for March was fifty-five degrees, which was twelve degrees above the average for the past eleven years. This unseasonably warm weather continued during the first half of April, followed by a second edition of winter, north winds and frosty nights prevailing until the middle of May. Temperature for the first half of May fell seven degrees below the average. Of the earlier migrants most of the breeding species came at their usual time, and took their places, having few attendant birds even of such abundant species as the Junco, Robin and Blackbirds. Not an individual was seen of several species that are regarded as tolerably common in most years. The warm weather brought but two birds out of season that were seen, a Ruby-crowned Kinglet, on March 28, and a Solitary Sandpiper on April 14: both of them a little more than two weeks in advance of their average dates for first arrivals. Dates for migration and nesting in this locality will have no suggestive value unless it is kept in mind that ordinarily they are from one to two weeks later than are such dates in northern Ohio, or the vicinity of New York City.

The cool weather during the second half of the migration

season seems to have retarded first arrivals from two to six days beyond the average time. A south wind and bright sunshine on May 14 brought a strong influx of birds, nineteen species being seen on that day for the first time this year. It was upon activities connected with nesting that the variant weather appears to have had the greatest influence. Prairie Chickens were heard booming on March 24, and White-rumped Shrikes were courting on the following day. Nests of the latter species were found, one containing one egg on May 2, and another with four eggs on the next day. A Screech Owl on our place laid her first egg on March 27, and her last egg was hatched in the afternoon of April 29. Five eggs of a Crow hatched between the mornings of April 30 and May 2. A Meadowlark's nest found early in the last week of April containing four eggs had the first one hatched on May 6. Three Flickers went to roost in our barn on the evening of March 31, which was fifteen days earlier than any previous record, and the first Flicker's egg was laid there on May 5, ten days in advance of the average date. The male Brown Thrasher, that is a summer resident of this place, arrived on April 29, but his mate did not join him here until May 6, unless she escaped the close watchfulness of three people. The pair began nest-building early the next morning and the first egg was deposited on May 13. This is the most expeditious settlement to nesting ever observed here.

Far less fortunate has been the early nesting of some other birds. A Song Sparrow's nest, containing five eggs, found on April 19, was deserted and filled with snow four days later. The snow storms and freezing weather of this period caused a Bluebird to desert her nest in which the first egg was laid on April 14; and a few Robins' nests were found with broken eggs in them.

National, Iowa.

ON SOME EGGS SUPPOSED TO BE NEW TO SCIENCE.

BY W. F. HENNINGER.

Lately it has been my good fortune to come into the possession of some eggs, which hitherto have remained undescribed to my knowledge. They have perhaps been taken previously, but nothing seems to have been published concerning them in our leading bird journals or bird books. And if so, it might still be of some use to the readers of the Bulletin to have before them an accurate account o f them, easily accessible.

The first species, whose eggs I wish to describe are those of the Slatybacked Gull (*Larus schistisagus*). There are three sets of them, one of 3, one of 2, and one of 1, a very large egg, abnormal in size and coloration. They were all taken on the coast of Siberia, near the Bering Strait, on June 4, 1905. The nest was a mere depression or hollow in some moss. Just as the bird itself is intermediate in size between *Larus marinus* and *Larus cachinnans,* the eggs show the same relation, barring the one of abnormal size, which is equal in size to those of marinus, measuring 81 x 52 mm. The other five measure 76 x 52; 71 x 51; 69 x 49.5; 76.25 x 54; 72 x 53. The six eggs average 74.28 x 51.91.

The other species are Allen's Ptarmigan (*Lagopus lagopus alleni*) and Welch's Ptarmigan (*Lagopus welchi*). Major Bendire expressed the opinion that these eggs would prove to be indistinguishable from those of *Lagopus lagopus* proper and *Lagopus rupestris.* And this is exactly the case. I have handled hundreds of Ptarmigan eggs in the past in Europe and find that here are no distinguishing features that prove to be constant. The two sets have eight eggs each, Allen's Ptamigan's eggs were taken June 6, 1900, Welch's on June 1, 1900, both of course in Newfoundland. Both nests were practically alike in structure, according to the data. The eight Allen's Ptarmigan's eggs measure 41 x 30; 43.5 x 31; 45 x 31; 44 x 32; 40 x 31; 44.5 x 31; 44.5 x 31; 43 x 31, and they have

perhaps a darker, less reddish, shade, than those o fthe next species. These the eight eggs of Welch's Ptarmigan measure 43 x 31; 44 x 31; 42 x 30; 40 x 31; 42.5 x 31.5; 41.5 x 30.5; 42 x 31; 42 x 31. Average 42.12 x 30.87. Average of Allen's Ptarmingan 43.78 x 31. Bendire gives the measurements of the eggs of *Lagopus lagopus* as 43 x 31 (average) of rupestris as 42 x 30.

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EDITORIAL.

So much good material was offered for the present number of the Bulletin that it has been necessary to again defer the paper on Falcones. The delay will result in a much better paper.

The editor will spend all of August and the first twelve days of September with a group of students on Pelee island as headquarters, studying the ecology of the region and investigating the fall migrations of the birds which pass that way. From the beginning of July until the middle of September mail should be addressed to him at Birmingham, Ohio. Mail will reach him if addressed to Oberlin, but it is likely to be delayed if so addressed, during the time stated.

If any one needed to be convinced that weather conditions profoundly influence the migrations of the birds, particularly the later migrants, he must have convincing proof in the weather and migrations of the past three months. We ought not to permit such an occasion to pass without enquiring into the extent of the influence. If persons who read this note will take the trouble to send to the editor a brief, or more extended note of the conditions which

prevailed in his or her region a report will be prepared for publication in this magazine. The questions asked are: How long were birds held back by weather? How many species were affected? Were individuals of late arriving species less numerous than usual? Was there noticeable increase in mortality?

REVIEWS

"The Nature Study Review," official organ of American Nature Study Society, March, 1910, Bird Study number. A splendid number, replete with excellent photos and good sound common sense ——— on bird protection by C. F. Hodge, J. E. Hess, G. H. Trafton, T. L. Hankinson, Fred L. Charles and others, with a bird identification chart especially adapted to the public schools, proves its sterling worth without any further advertisements. We wish it God-speed on its journey and hope it will prosper and grow to be a permanent stronghold in the protection of birds.

"NOTES ON SOME OF THE RARER BIRDS OF WASHTENAW CO., MICH. (Reprint from the Auk, Vol. XXVII, No. 2, April, 1910.)

This is an excellent list of 34 species, with annotations, prepared with great care and accuracy by two well known field-workers of the Wilson Club, Norman A. Wood and A. D. Tinker. The comparisons with former lists are thorough, errors of these are corrected, evidence always being furnished by the actual capture of specimens. We note with surprise the apparent scarcity of some species compared with conditions in northern Ohio. We would like to point out to the authors the fact that the Pine Warbler is not necessarily confined to coniferous woods as its breeding haunts, Professor Ridgway's records from southern Illinois and the reviewer's own from southern Ohio proving as much. We only regret that the list was not first sent to the Wilson Bulletin, the best and only bird journal of the middle west, which should be the medium of publication for all the bird students of this region.

W. F. H.

"YEARBOOK OF THE DEPARTMENT OF AGRICULTURE, 1909."

This most valuable book contains a splendid article by W. L. McAtee on "Plants useful to attract birds and protect fruit," which is timely indeed. In European countries careful attention has long since been paid to the restoration of conditions favorable to bird life on land from which cultivation and civilization have

driven the birds. Similar results can be produced in America, if the farmers are once awakened to the fact that the ruthless destruction of trees and underbrush and the present robber system of farming will finally make a howling wilderness and solitude out of this glorious country as far as bird life is concerned. Mr. McAtee's article is practical; it shows what kinds of plants, shrubs and trees should be planted in the various zones and faunal areas to attract birds, to induce them to nest with us and how their attention can be diverted from fruits, the planting of mulberry trees being especially recommended in this respect. If the sound advice in this article is heeded the country over, a great advance will be made towards keeping our birds—what few there are still left—with us.

In an article, "Pocket Gophers as Enemies of Trees," Mr. David E. Lantz calls our attention to numerous Mammals and Birds, that keep these pests in check, the Great Blue Heron and the Barn Owl being foremost in this respect, while all the Hawks and Owls come in for their share of praise. Apropos it is about time the insane and indiscriminate slaughter of the Hawks and Owls is stopped. It is not sufficient to merely point out the good these birds do, but the murderous custom of shooting them at random should be stopped.

The third article in this book relating to birds is entitled "Introduction of the Hungarian Partridge into the United States."

"Birds Collected and Observed During the Cruise of the United State Fisheries Steamer 'Albatross' in the North Pacific Ocean and in the Behring, Ochotsk, Japan, and Eastern Seas," April to December, 1906. By Austin Hobart Clark.

Dr. Clark, in a pamphlet of forty-nine pages [reprint from U. S. N. M. proceedings], gives us a thorough and excellent report of work done in those remote regions by himself, often under most provoking circumstances. The Linschoten Islands, absolutely terra incognita, were only touched during the cruise. No trace of Pallas' Cormorant was found: under the remarks of the lagopus groups we notice some careful work of the author, but the last word in regard to the various races of these birds has certainly not yet been spoken. Why the name of Larus barrovianus is retained in view of recent investigations by Dr. Dwight, is a mystery. Incidentally a timely remark is made concerning the A. O. U. check list being out of date. It has often been a surprise to us that such a check list is retained by the A. O. U., when it is well known that the science of ornithology has progressed in its classification, based upon the anatomical structure of birds, away beyond the clumsy

method employed in the Check List. It is an ultra conservatism that is annoying, exasperating and at the same time ridiculous. The same clumsy method is adhered to, however, when the measurements of Hutchin's Goose are given in inches by Dr. Clark, while he uses the metric system at other times. Why we should follow England in this respect and employ such an out-of-date system of measuring, trailing along 120 years behind the times, passes the understanding of man.

"REPORT ON A COLLECTION OF BIRDS MADE BY PIERRE LOUIS JOUY IN KOREA." By AUSTIN H. CLARK.

A careful enumeration of a collection of birds made by the late Mr. Jouy, with annotations, covering twenty-nine pages. As the references are given in regard to the European and Asiatic species mostly, it will be of interest only to those who have a good knowledge of those species. We have in the past had an acquaintance with most of these and are therefore in a position to say that the list as published is a most welcome and important addition to the literature relating to the birds of Eastern Asia. W. F. H.

FIELD NOTES

NOTES FROM EASTERN OHIO.—Snowy Owl in Jefferson Co., Ohio.—About the 10th day of May of last year a Snowy Owl was captured by Mr. and Mrs. E. C. Gerke at Rayland, Ohio. It was taken to Steubenville by R. E. Large and was pronounced a "snow owl" by the Steubenville papers. In order to be sure of its identity I wrote to Mr. Large for a description of the bird. It is an unusually late date for this owl in eastern Ohio.

Red-tailed Hawk.—I have the names of two farmers who are doing all they can to exterminate the Red-tailed Hawk. Both reside about ten miles from Cadiz. One of them caught forty hawks last year, mostly Red-tails, by trapping them with dead poultry. I have noticed fewer hawks in this vicinity as a consequence.

Prothonotary Warbler.—On the morning of May 11, 1909, while in my favorite woods looking for migrants, a yellowish warbler flew directly at me, missing my face by less than a yard. That evening, in the same woods, a yellow streak came swiftly along the line of the rays of the setting sun, passed me at arm's length, and caused me to reflect that it was unusual for the Kentucky Warbler to behave in that manner, for I judged it to be one of that species.

As I turned to see what become of the bird I saw that it had alighted on a log but a few feet away. At once I saw that it was not the Kentucky, and as the bird afforded me every opportunity for a perfect identification I had the pleasure of making a study of my first Prothonotary Warbler at very close range, as it remained within less than twenty-five feet of me for at least twenty minutes.

Purple Martin.—On March 19, 1907, a single Purple Martin made its appearance at the martin box owned by E. M. Long in Cadiz. They usually appear here before the end of that month.

Cowbird.—From February 23, 1906, on to the end of the month, I saw a Cowbird in my garden every day. I find it the most irregular in its arrival of all our summer residents.

Whistling Swan.—On March 18, 1907, Frank McCombs shot a Whistling Swan five miles north of Cadiz, and four days later one was shot by W. E. Mong about ten miles north of Cadiz. The birds were shot simply because they were rare and furnished a target for the gunner. Harry B. McConnell, Cadiz, Ohio.

Henslow's Sparrow Nesting in Ohio.—On June 3, 1904, at Tiffin, Seneca County, Ohio, I took a nest and four eggs in a rather swampy clover field three miles northeast of town. I flushed the bird from the nest, but could not get the proper identifying glance at him, although I heard the note "tse seep" several times, and I knew the bird from former experience in the Mississippi Valley. On September 25, 1906, I was lucky enough to see the species there as recorded in the Wilson Bulletin, December, 1906, page 136, which confirmed my former identification. In order to be absolutely certain I had Mr. J. Claire Wood, our fellow member, send me his set, taken in Michigan. On comparing the two sets of eggs they at once showed to be the same species' eggs, viz., Henslow's Sparrows. My whole set is more uniform in coloration than his, the greenish tint is not quite so heavy in my eggs; the pattern of the spots is the same. Ground color greenish white, a wreath of reddish and lavender specks on the blunt end, smaller reddish specks over the body of the egg. His set of three eggs averages 18.63 x 13.55 mm.; my set averages 18.87 x 13.75 mm. The location of the nests was the same, built on the bottom side of a grass tussock, sunk in the ground and arched over as some Meadowlark's nests are. They were both composed of grass, rather loosely made, but still more substantial than those of the Grasshopper Sparrow. Hence there is no doubt but what my original identification was correct, and that I took on that memorable day the *first authentic set of eggs of Henslow's Sparrow in Ohio.* I want to express my

sincere thanks to Mr. J. Claire Wood for his generosity in placing at my disposal his set and notes. An extensive article about it has been sent to the Auk for the benefit of the New England and New York ornithologists. W. F. HENNINGER.

RED-HEADED WOODPECKERS VS. BLUE JAYS.—On the 25th of October of the past year, while walking through a grove of hickory and oaks, I was startled by the sharp cry of a Blue Jay close above my head, and on looking up became aware that a pair of Red-headed Woodpeckers and four Blue Jays were engaged in a noisy encounter over a large fragment of decayed suet, which had probably been obtained from a neighboring refuse pile. The Red-heads were in possession of the morsel and the Jays were doing their best to get it away from them. The Jays repeatedly attacked and were repulsed as often by the Woodpeckers, the latter easily dispersing the assaulters by attempting to pierce the bodies of the Jays with their sharp bills. The Jays' principal method of attack was to singly pounce down near the Red-heads on the trunk of the tree on which the Woodpeckers had established themselves and utter shrill cries and try to snatch the suet, but on finding that single attempts were of no avail, rallied their forces and then made a general advance, each adopting a different method of strategy to gain the desired end. All their efforts were of no use, and after almost a half hour of fierce battle, the Jays left the Red-heads with their quarry and flew off, apparently much disappointed and disgusted to the other end of the grove. Bearing in mind that the Jays are not prone to give in quickly and are also quite covetous, I remained sitting on a fallen stump just out of view of the Red-heads and watched to see if they would renew the combat. Several times a single Jay returned to the scene of the battle, approaching as quietly as possible until assured that the Woodpeckers were still on guard, and then with loud calls flew back and joined its fellows. This was quite an unique encounter, and the first ever to come to my attention in which the principals were the Red-heads and the Jays. LOUIS S. KOHLER, Bloomfield, N. J.

BLUEBIRDS VS. ENGLISH SPARROWS.—At Pompton Junction, N. J., on February 2, I found a pair of Bluebirds engaged in defending a deserted Woodpecker's home from the assault of eight or ten English Sparrows. The conflict continued intermittently until March 4, when the Sparrows went off to a neighboring apple tree and established themselves there. The Bluebirds immediately began gathering nesting materials and displayed indications of early breeding. On the 7th the nest was found to have been completed

and contained one egg. On the 22d the nest was again visited and found deserted, and the eggs, four in all, appeared to have been frozen and were very much broken up.

This is a very premature nesting period for this species in this locality and it has excited my curiosity as to whether other observers have located similar nests. The only other instance on which I have located a nest of the Bluebird earlier than April 15, was on April 8, 1906. This later was found in an old apple tree in Bloomfield, N. J., and had three young birds about two days old when discovered. LOUIS S. KOHLER, Bloomfield, N. J.

ADDITIONAL VERNACULAR NAME FOR THE FLICKER (*Colaptes auratus*).—It is known to native Floridians in this part of the state as "Cotton-backed Yellowhammer." The first part of the name is to distinguish it from the Red-bellied Woodpecker, which they sometimes call simply the "Yellowhammer."

G. CLYDE FISHER, De Funiak Springs, Fla.

PERSONALS

OUR MEMBERS HERE AND THERE.

Mr. Chreswell J. Hunt, the well known secretary of the Delaware Valley Ornithological Club, has moved to Oak Park, Ill., and will now have an opportunity to work in a new field. We give him the glad hand shake in the great Middle West.

Dr. B. R. Bales, who is not only an ardent ornithologist, but also quite a lepidopterist, intends to buy an automobile in order to cover long distances to various bird homes in his vicinity. He reports the taking of three Ring-necked Ducks at Circleville this spring, quite a good record for Ohio, proving the Dr. to be always on the go in spite of his busy professional life.

Now why did you forget to send your Field Notes to the Wilson Bulletin? Yes, why!?

Professor C. R. Keyes of Mt. Vernon, Ia., at one time secretary of that wide-awake organization, the Cooper Club, recently joined our ranks. He has quite an article of decided merit on the Great Horned Owls in the New York Independent of April 21, 1910.

Mr. Ruthven Deane reports a number of Purple Martins picked up in an exhausted condition at Evanston, north of Chicago, after the severe storm of April.

A Flicker Courtship

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AT THE SIGN OF THE NORTHERN FLICKER.

INTRODUCTION.

The studies upon which this paper is based were conducted at National, Iowa, which is situated in the north-eastern part of Clinton county, a few miles inland and south-west from McGregor. That it is an exceptionally favorable place for the study of birds the readers of the WILSON BULLETIN know from the few short articles and notes by the author of this paper which have appeared in the BULLETIN from time to time.

If we properly interpret the particular function of the WILSON BULLETIN, this paper accurately typifies it. While there is a certain value to the detection of slight differences in the plumage of our North American birds from museum specimens, and perhaps a necessity for giving names to groups of idividuals showing the differences, it remains for the careful student of the livng birds to detect the causes for such variations. Of the two fields of study it must be clear to all that the study of the living bird in its environment is much

the more necessary. THE BULLETIN has consistently urged upon its readers the earnest pursuit of field studies, and takes this opportunity to again urge it. We *must* know more about the living bird before we can expect to assign him his proper place in the world of taxonomy as well the world of conservation in all of its aspects. Our imperfect knowledge makes any system of taxonomy admittedly tentative.

If we read this paper aright we will detect all along between the lines a devotion to the study in hand which spells an enormous amount of labor. Try it if you don't believe it!

[ED.]

The West End of the Barn in which the Flickers Nest

AT THE SIGN OF THE NORTHERN FLICKER.

BY ALTHEA R. SHERMAN.

The apartment building that displays flicker-signs all the year around is our barn. These signs consist of the holes chiseled through the siding; the marks left by the birds' muddy toes and tails, and the splashes of gastric juice which sometimes adher to the walls of the barn for a distance of two feet above and seven feet below the hole, and remain many weeks before they are washed off by the rain.

The date of the making of the first hole has not been kept, but as long ago as 1897 a pair of Flickers nested in the space into which this hole opens, a space four by fifteen by twenty-three inches formed by a board parallel to the rafters, nailed to the studding which kept the hay back from the wall of the barn. For purposes of observation it was covered with a movable board which had a peep-hole in it. In this accidentally formed cavity three years out of four Flickers raised their young, but in the spring of 1903 there came a frantic female that would not settle in the old nesting place in the east end until the pair had drilled two other holes, one in the west end, and the other in the south side of the barn. Back of each of these new holes a box was placed in the following spring, but

these proved too shallow to suit the birds for other than roosting places. Early in 1908 the first boxes were replaced by boxes made to hold one hundred cakes of that fair emblem of civilization—soap. These offer a nest room eight by twelve inches on the bottom and eighteen inches deep. In the top of each box a hole was made for observations, and a few inches from the bottom a hole large enough to withdraw the hand while it held a well-grown nestling. This hand-hole was closed by a trap-door, and the bottom of the nest was covered with excelsior, into which sawdust was firmly packed.

One male Flicker has been the subject of study for four summers. The conviction that it is the same bird each season is founded on the facts of his increasing tameness year after year, his unhesitating occupancy of the barn, and the shape of his almost circular malar stripes. On the fifteenth of April, 1908, he had taken possession of the south box, and was calling, drumming and practicing flicker-antics in the presence of a female, believed to be his mate. That he with his spacious ready furnished apartment may have proved unusually attractive to the female heart is an incident, which ought not to be too severely condemned by a race of beings among whom male creation is often courted for no superior reasons. Whatever were the underlying motives it is certain that by the twenty-fourth of the month two females were conducting an ardent competitive courtship which lasted five or six days. It was impossible to detect any new methods in their manner of wooing. There were the same struttings and spreading of feathers, the same dancing, bobbing and bowing that is practiced by the males in a similar situation.

On the evening of April 30, the rivalry having ended, a female was found roosting in the west box, two nights later the male was there. On half of the remaining nights before the first egg was laid the female roosted in the west box while the male occupied the south one. A burning question arose as to which box would be used for breeding purposes. The south one was much better located for human observations, also for

Characteristic Postures

bird comfort, it being in the shade of tall maples and a walnut tree. Both holes had been used by the birds during the courting season, and in both boxes the excelsior had been torn up and carried out, therefore the finding of an egg in the south box on the morning of May 15 was a pleasurable occasion.

From what has been related it easily may be seen that the male bird chose the nesting place, and persuaded his mate to lay her eggs there, even when she was inclined to nest elsewhere, and when she had a box quite as good as his.

The preliminaries to nesting this season differed little from those of last. Again the male suffered a dual courtship, but it lasted one day only. Three days thereafter his mate cleaned house although the sawdust was fresh and needed not to be cast out. Again there was a seeming indecision as to choice of box for nesting, and again on May 15 the first egg was laid in the south box. This made the third year when laying had commenced on that date. On other seasons the date had been a little earlier, and once a month later.

Before the eggs were laid in 1908 the male roosted part of the time in the south hole, and the female part of the time in the west hole. While the eggs were being laid, and before incubation began the male roosted in the box with the eggs. After that, incubation or the brooding of the young at night was performed mainly by the male, but on several nights the female took these tasks, and he went to lodge in the west box, where she generally, but not always, spent her nights. This nocturnal interchange of duties appears to be somewhat unusual. In 1909 the order of things was changed a trifle. The male bird began roosting in the south box on the evening of April 17, and spent every night there until that of June 23, sixty-seven nights in all. With the exception of five nights the female was a regular occupant of the west box from April 24 to June 3, after which she spent a few nights in the east hole. This desertion of her lodging place may have been caused by unwelcome visits made there by Screech Owls. For it was in this west box on April 5 that a Screech Owl was found sitting on

four fresh eggs. This nesting was ruined by a violent wind storm, yet it was believed that the owls occasionally returned to their chosen quarters.

It may be in place to say a few words regarding the popular conception of a Flicker's nest. It is usually described as "a hot, dark hole." The nest in the hollow tree cannot be vastly different from that in the barn. There it is hot when it is hot elsewhere, and it is cold when it is cold elsewhere, even when it is windy outside enough of the breeze enters to stir the feathers on the bird's back. But the worst misapprehension exists regarding the darkness in the nest. It is surprising how much light enters through a hole two and one-half inches in diameter. In the case of the south hole in our barn it lights the box sufficiently in the daytime for one to read a newspaper spread on the bottom, when the eye is at the customary distance of about twenty-two inches.

The number of eggs laid in these barn nests has been from seven to nine, with generally one to three infertile. They were deposited on the hay in the old nest, on the level surface of the sawdust in the new without any effort to hollow out a place for them. Beginning with the laying of the first egg it is the custom for one of the pair to remain in the hole as a guard for the jewel-like treasures that lie there. A lapse in this guardianship duty must have occurred some time in the day of May 16 last, for an enemy entered and destroyed the two eggs of the nest. Circumstantial evidence pointed to a pair of Red-headed Woodpeckers that in their search for a nesting-place were acting like beings possessed by an evil spirit. The next morning the distressed female Flicker flew about as if seeking a new nest. Her mate sitting in the south hole, called to her, evidently coaxing her to return to the old place, which she did.

A study of the growth of the young by weight has included the weighing and the marking of the eggs in the order in which they were laid. The usual time for depositing the eggs in the nest appears to be the hour between five and six o'clock in the

morning. The first exact data was obtained May 20, 1908, when the sixth egg was laid at five o'clock and forty-eight minutes. It was five o'clock and eighteen minutes on May 22 of this year when the sixth egg of the new series was laid, and the seventh was on the following morning at five o'clock and forty-nine minutes. The marking of this seventh egg had been postponed until four o'clock in the afternoon when a little surprise was in store. Beside it lay the eighth egg left there sometime between the hours of eleven and four o'clock. It made the identification of the seventh egg impossible so the two were marked as twins. The weight of one of these eggs was a trifle in excess of that of any of the others, and the weight of the other twin was above the average. Before six o'clock the next morning the ninth egg of the new series—the eleventh one of all—had been deposited. At this juncture a message summoned me to a distant state. My absence extended over the greater part of the time of incubation, which probably did not differ much in history from that of the nests of previous years from which I shall describe the nest activities of this period. I am greatly indebted to a friend, who in my absence visited the barn every evening and ascertained that incubation was performed by the male bird during all of the nights, while the female roosted in the west box every night except three.

By day the duties of incubation seem to be shared about equally between the two birds, who are close sitters, the eggs seldom being found alone. Of the length of the sittings no adequate record has been kept, but those lasting from one hour and a half to two hours have been noted. The bird that is returning to the nest announces its approach by a soft "wick-ah-wick" note, which the sitter answers as a rule, and at once takes its departure, flying past the mate that is hanging to the outside of the hole. It is contrary to Flicker etiquette for both of the pair to occupy the nest at the same time, and never but once have I seen one enter the hole until its mate had left. Then it was the male, who in his headlong haste, blundered in while the mother was feeding the young, and hurried her de-

parture. In the years of close study of this species I have never seen anything that suggested the feeding of one mate by the other and I doubt very much if this is done. The incoming bird enters cautiously, turns, inspects the works of creation without, hangs an instant with one foot grasping the lower edge of the hole and the other the wall below, then with a thud it drops to the bottom of the nest, but never upon the eggs. To cover the eggs the bird goes to one side of them, straddles those nearest to it, then with a hitching motion moves along until all are covered. No matter how wet and muddy it is out of doors the eggs have never been soiled.

After the nesting took place on the sawdust in the south box a new feature has been added to the routine of the nest. Before the bird covers the eggs or the young, whichever it chances to be, it eats some sawdust. The craving for sawdust seems to be limited to this period of the bird's life since no signs have been found to show that it eats any of the sawdust while it occupies the boxes before and after the nesting time. The amount eaten is considerable. That at one time the male ate three tablespoonfuls is deemed a modest estimate. An attempt to measure the amount both ate by a fresh supply daily showed the consumption of three or more handfuls. The sawdust came from sugar maple, white and red oak wood.

After the bird has arranged itself comfortably upon the eggs it goes to sleep. The female sleeps most frequently with her head turned until her bill rests among the feathers of her back. The male sometimes takes this position but not often. He sleeps with his neck flexed until his bill touches one wing, or with his head straight forward and turned down until it rests on the crown, or, the favorite position of all, with his head lying flat upon the bottom of the nest, thus making as fine a "picture of calm content as mortal ever saw."

From some former nests it had been learned that sometimes the eggs hatched in nine days, but more frequently in ten days after the laying of the last egg. On May 20, 1908, the sixth egg was seen to have been laid at five o'clock and forty-eight

minutes. Incubation began that day. On the morning of June 1, the eggs were hatching; four tiny Flickers were squirming in the nest, and as the father raised himself into a standing position one of the remaining eggs broke slowly open and another Flicker kicked itself into the world. It was a moment thrilling with interest when bird and shell were lifted from the nest, and the shell was found to bear the number six. The hour was nine o'clock and forty minutes. The exact time for incubation had been twelve days, three hours and fifty-two minutes. The seventh egg hatched four hours later making its period of incubation eleven days and eight hours nearly.

I was anxious to be beside the Flicker's box when their eggs hatched this year. Two periods for incubation had now been furnished, nine days and ten days from the date of the laying of the last egg. Therefore my return was planned for June 2. During the thirty-six hours that the iron horse bore two of us swiftly homeward, crossing and recrossing our longest rivers, and rushing over our most beautiful plains, one question kept recurring with insistent frequency: Was there danger in this case that the period might be shorter than ten days? If so, we should be too late for part of the hatching at least. When at length the Sign of the Northern Flicker had been reached, one peep into the nest revealed the facts that all nine eggs were safe, and dark with the embryos of the living birds.

The next morning being the tenth one from the date when the last egg was laid, and the eleventh from the time incubation began, a very early stand was taken beside the nesting box, but it was not until five o'clock and forty-two minutes that the occupant of egg No. 1 was sprawling in the nest. Three hours later the shells of eggs No. 2 and No. 3 were chipped, but the bird in No. 2, as well as that in No. 4, died in the shell after it had been pierced. The bird from the third egg was hatched at ten o'clock and two minutes, and the one from the fifth egg at ten o'clock and twenty-five minutes. At half-past one in the afternoon a shell that proved to be No. 6 broke open. This was the egg that was laid on May 22 at five o'clock and eighteen

minutes, hence its period of incubation had been twelve days, eight hours and twelve minutes, while that of the sixth egg of the previous year had been twelve days, three hours and fifty-two minutes. Although the shell of one of the twin eggs was chipped several hours before dark both of these eggs were hatched in the night, and the ninth or last egg at ten o'clock and forty-eight minutes on the following day, making its period of incubation eleven days and five hours, while eleven days and eight hours had been the period for the last egg of the clutch of the preceeding year. Roughly speaking, then, the time that our Flickers take for incubation is from eleven to twelve days.

The pellucid color of the newly hatched Flicker resembles that of freshly sun-burned human skin, but so translucent is the nestling's skin that immediately after a feeding one can see the line of ants that stretches down the bird's throat and remains in view two or three minutes before passing onward, This may be witnessed for several days while the skin assumes a coarser red, until it begins to thicken and become a bluish hue, before the appearance of the pin-feathers. These may be detected under the skin on the fifth day at the same time that bristle-like projections about one-sixteenth of an inch long announce the coming of the rectrices and remiges.

Until the young are about eleven days old, they lie in a circle in the nest, their long necks stretched over each other, then for nearly a week they press against the side of the nest. At seventeen or eighteen days of age, their claws having acquired a needle-like sharpness, they begin to cling to the wall of the nest, and when three weeks old they are able to climb to the hole and be fed while the parent hangs outside.

Although the eyes of the nestlings are not open until they are ten days old yet these organs are by no means dormant. An easy proof of this is made by placing the hand noiselessly over the entrance hole when they are no more than three or four days old, and are lying apparently asleep; up comes every head and they beg for food, getting none they soon sleep, when

the experiment may be repeated, gaining from the young the same response that is given when a parent darkens the hole.

That cry of the young which is so often described as a hissing sound, begins very soon after they are hatched. At first exceedingly faint it soon grows stronger and still stronger, and is uttered day and night for two weeks. A parent upon taking its place to brood these wailing nestlings begins to croon a lullaby and continues this musical murmur until it falls asleep, which often is quite soon. It has no effect in lessening the noise of the youngsters, yet the parent faithfully renders its cradle song until the young cease to make this noise which is about the time they begin to show fear. Of other cries that they make there is the chuckling noise uttered when the little one is in the act of seizing the food-bearing bill, and there is a cry that sounds like a whine. Still another one is a note of alarm given when the young are disturbed by some such thing as the opening of the trap door. This uttered in unison has a very theatrical effect strongly suggesting the chorus of the stage. After they have commenced to move about freely in the nest they make much of the time a pleasant sound like a chatter or quack, as if talking to each other. And lastly comes the grown-up Flicker "pe-ap," which they begin to call as soon as they climb to the hole. As one sits in the hole it appears the personification of juvenile impudence shouting its mandatory call. A change may be detected in the accent of this note after a feeding, when the fellow, that has received little or nothing having gained the hole, hurls after the retiring parent a yelp that sounds truly derisive.

This arrival at the entrance hole works a decided change in the young Flicker; he utters for the first time a call of his adult years, and he shows pugnacity remarkable because of its contrast with his earlier and later peaceful disposition. The versifier who wrote

> "Birds in their nest agree;
> And 'tis a shameful sight,
> When children of one family
> Fall out and chide and fight."

evidently was not familiar with the inside of a Flicker's nest, where they fight like little demons at times. Some broods are much more quarrelsome than others. Their battle-ground is in the vicinity of the hole. The one in possession of the hole maintains his supremacy there by occasional withdrawals of his head from the hole in order to deliver vigorous blows on the heads of all within his reach, causing them to shrink downward. This is the case with the stronger ones, the weaker ones frequently are driven from the vantage place. When the hole is large enough for two to thrust out their heads together, they draw within after the serving of a meal and fight furiously, while a waiting third may slip up and gain the coveted hole. But all their fighting days seeem to be confined to a few in the fourth week of their lives.

They have other occupations besides fighting during the last ten or twelve days spent in the nest. Preening themselves comes first, immediately followed by the amusement of running out their long tongues. This organ is extended the length of an inch and a half from the tip of the bill which seems extreme for such small birds. It is run over the wall of the nest, through each others feathers, or over a hand introduced into the box. The tongue is extended straight out from the bill, and the withdrawal is straight backward at times, but at other times it is whipped around almost at right angles to the bill, then disappears like a flash. They peck good-naturedly at each other and at their own toes; they hammer with the point of the bill, and of course they sleep much of the time either on the bottom of the nest or clinging to its walls. In sleep the head rests in various positions; when it is turned backward one can see exactly where the bill is placed; on these half fledged little creatures there is a naked strip between the feathers of the dorsal tract and those growing on the wing, upon this naked surface the bill rests, hence not under the wing but back of it—*parapternum*, beside the wing, describes it..

The tables of growth give the daily weights of the nestling Flickers from the time they were hatched until they left the

Young Flicker on the Day it Left the Nest

nest. In 1909 the eggs, when fresh, weighed from 106 to 111 grains, and the same eggs just before they were hatched weighed from 91 to 96 grains. The young birds freed from the shells weighed from 83 to 85 grains. The hour for hatching was reckoned from the time an egg burst open; the rest of the act of exclusion from the shell took place either in my hand or in the weighing bag, hence there was no chance for the nestling to receive food before the first weighing. The first little Flicker was not fed until it was two hours and twenty-two minutes old, then the mother inserting her bill very, very gently fed it until its weight had increased three grains.

In very early life a meal is served to baby Flicker with many insertions of the parent's bill, as many as thirty-four have been counted, but from eight to twenty are the ordinary number, decreasing to three or four before the young leave the nest. A record made during a continuous watch of six hours and thirty-two minutes shows that each parent fed five times; that the father delivered his supply with eighty-two insertions of the bill, while the mother used but forty-one. Probably the father brought more food since on every count he proved himself the more devoted parent. In grasping the bill the point of the youngster's bill is at right angles with that of the parent's, thus the opening between the food-bearing mandibles is covered after the young have attained a few days of age, and any over-dropping of food is prevented. This accident frequently happens in the early days of the nest, then the mussed up ants that fall are carefully picked up by the frugal parent when the feeding is over.

Those persons, who have watched and weighed birds from the hour of their hatching, realize what an advantage is held by the first-born. The few meals it receives in advance of the others give it a start that makes it stronger, its neck longer, and its mouth wider, so that it easily holds the lead in the race for food. This great advantage may be seen by comparing the daily gain of the oldest Flicker with that made by the others in the record for 1908, which is of nest life normal in all respects.

This record shows that the increase in the average weights is upward of one hundred grains per day for the first eleven or twelve days, after that from twenty-five to forty grains daily. All my records show that there is a period of four or five days somewhere between the thirteenth and twenty-second day when there is little increase, or sometimes a decrease in weights for a few days. Several other species, whose growth by weight has been studied, have furnished similar examples, and as this period of very slight increase, or possibly decrease in weight occurs not far from the time the nestlings begin to show fear, and their wing-feathers burst from enclosing sheaths, it is probable that three points of interest center about this period of their lives.

Although Flickers remain in the nest much longer than many of our common birds, and their rate of growth is very fast at first, yet the scales show that this growth is not proportionately very much greater than that of some other birds. Taking the following species on the ninth day of their lives we may find that the Flicker weighs twelve times as much as it did when hatched. Phoebe and Red-winged Blackbird have each increased their weight ten times, the Song Sparrow and Catbird eight times, while the Mourning Dove weighs but seven and a half times its first weight.

Numerous attempts have been made to ascertain the amount of food brought to the nest for one meal. The young were all removed from the nest except one hungry fellow that was weighed just before and after the visit of the parent. The increase in weight must have been that of the dinner just delivered. Experiments show that to a nestling weighing 143 grains was given a breakfast that weighed 76 grains, to one weighing 1430 grains a dinner of 118 grains, and to another that tipped the scales at 1530 grains a supper of 103 grains. Probably the weight of the average load is not far from one hundred grains.

The number of daily visits increases with the age of the nestling from about ten on the first day to four or five times that number later. Six or seven meals may be served within an

early hour, as many as four arriving within seventeen minutes, while at other times nearly an hour may intervene between two visits. When the young were eighteen days old during a watch of four and one-half hours twenty-five meals were given to five nestlings that wore distinguishing marks. Three of these are positively known to have received five meals apiece, and two received four apiece, if the two undetermined feedings went to the latter pair, then each one was fed at the rate of one meal every fifty-four minutes. On the following day a count was made of meals given during four hours, which numbered twenty-two. At this age the young Flickers every hour partake of food to the amount of one-sixteenth of their own weight, or in one day consume their full weight of food, yet the table of growth shows that it does not add to their weight to any noticeable extent.

In delivering the food the parents give Scripture measure, yet the young are never too full for utterance. With the food literally hanging over the edges of their bills they clamor for more until the parent leaves the hole. From this exposed food there comes a strong odor that fills the box and penetrates to the nostrils of the observer for three or four minutes after the feeding is over. The odor is not a disagreeable one, but strongly reminds us of that of a slightly over-ripe orange. It remains for the entomologist to tell us if this is the aroma of emmet jam. The filled up fledgeling slowly slips down to the bottom of the nest, there to sleep for a half hour or more; but before tranquility is restored to the nest there is a violent shaking of wings.

The subject of the cleaning of the nest would not be discussed here at length if it had not long been somewhat of a mystery to many, and if Flickers had not often been called very untidy house-keepers. The fact is they are very solicitous to keep a cleanly nest. Like many other altrical birds the Flicker eats the excrements for several days, generally for nine or ten days, then it begins to carry them out after feeding, often going out three times with the dejecta before settling down

to brood. If none of these are lying in the nest when the parent enters it begins after the feeding to solicit them. This is done by biting the heel joints sometimes, but more often the fleshy protuberance that bears that budding promise of the tail. That this nagging is no gentle measure may be judged from the way the nestling cries and tries to wriggle out of reach, for the parent is not content with three or four bites, but frequently inflicts as many as a dozen on one bird before it turns its attention to another. The victim of one parent's cleanly habit may receive the attention of the other parent in a very few minutes, and be worried until it yields a second excrement, then soon fall under the blows of the first parent again. Such triple importunities do occur, but not often. By such means the parents keep the nest scrupulously clean for three weeks.

The fecal matter is enclosed in a tough white sac that will withstand much rough handling without breaking. When the young are from fifteen to eighteen days of age the weight of these dejecta is the greatest. One of these weighed 146 grains, from a nestling of 1666 grains, another of 156 grains from a bird of 1908 grains, and another of 207 grains from a bird of 1828 grains. Statistics of this period of their lives show that each nestling is fed about once an hour, and the nest is cleaned for it once in two hours. When fledgelings begin to move about the enclosing sac is no longer formed. With the Flicker it disappears gradually; from the time they commence to climb the excrements decrease in size to about thirty grains, and one or two are dropped by each fledgling in an hour. The parents struggle heroically with the new conditions, but nature is against them. By the time the young take possession of the entrance hole they cease entering the nest at any time. But the tidiness of the parents does not extend to the ridding of the nest of the egg-shells which are rarely carried out on the day of hatching; they may lie a week before they are taken out, or are broken into tiny fragments.

Until 1909 the only menace to young Flicker life was a plague of lice. An infested English Sparrows' nest had been

routed from their nesting place shortly before a pair of Flickers settled there. They had reared a lusty brood to about their eleventh day, when the second generation of the plague, introduced by the sparrows, broke out. There were some chicken lice, but of chicken mites (Dermanyssus gallinae) there were myriads. Drastic measures were necessary: the nest was scalded with boiling water, then treated with a soap and kerosene emulsion. Daily the little Flickers were hand picked for vermin, and dusted with sulphur until the plague was abated.

This year trouble began because of three very cool days when the temperature did not rise above fifty-five degrees, and because there was a nestling twenty-nine hours younger than the eldest one. Flickers, like other birds, feed more the young that receive the food most readily. The youngster that has the widest mouth, or can suck the hardest gets the lion's share. Jostled to one side the baby of the brood soon became so weakened by the cold and the lack of food that it would fall over in its attempt to seize the parent's bill; before it could rise again perhaps the meal had been served. When it did secure the bill it was so weak it could not suck with a strong pull and was dropped by the parent in order to feed those that took the food with greater ease. From cold and starvation the baby died, aged four days.

The next morning one of the twins was passing through a similar experience. It was found very cold and straightened out in the rigor of death, but gasped a little when taken in the hand. It was carried into the house to the fire and warmed thoroughly; when returned to the nest it was too weak to hold the bill after grasping it, and fell back unnourished. Then it was that a human will rose up against what has been termed Providence, which in plainer English is often merely parental stupidity and indifference among mankind as well as among birds. Earthworms were dug, beheaded, and washed for the little starveling, for which it eagerly opened its mouth, but it could not swallow until the worm was started down its throat by means of the bent end of a wire hairpin. This was true of

the strongest of the Flickers: they made no effort to swallow until the hairpin, to the length of an inch or more, had been thrust down their throats: upon this they would suck vigorously with a loud smacking noise; but even then it was an onerous task to feed them, for earthworms, even when decapitated, are very sensitive about the order of their going, and positively refuse to back down a young Flicker's throat.

This year the young of the brood were named from the color of the cotton string each wore upon its left foot as a distinguishing mark. Very briefly the history of raising little Redfoot from death's door is this: After a long hard struggle in the feeding of the first worms it was sufficiently nourished to be returned to the nest, still it stood slight chance in the contest against the stronger ones. In this disadvantage Grayfoot, the other twin, shared; therefore the other nestlings were frequently taken from the nest and fed earthworms giving the twins opportunities to gain the whole meal. Later a better scheme was devised; by introducing a hand into the nest Redfoot was held in readiness for the return of Father Flicker, and by offering Redfoot's mouth to him first, the little one received all it could take. From extra attention through six days Redfoot made such rapid growth that it was able thereafter to hold its own, and the figures of the record show that as far as weight is a requisite it went forth into the world as well prepared as any.

On the warm, pleasant day following that of the successful resuscitation of Redfoot both twins had received extra feedings from the father, and could hold on to the bill like little leeches; after the daily weighing they were occupying the nest by themselves for a few minutes, when the mother came in. If alienists were called in to pass judgment upon what followed I am sure they would pronounce it a case of "brainstorm." Certainly it bordered on the extraordinary; probably there was a shock to the mother's nervous system caused by the absence of the rest of the brood, however it may have been she very roughly shook the twins about as they held tightly to her bill; then

she stopped feeding, solicited an excrement, obtained and ate it, after which she began feeding again—an unheard of thing to do—then with Grayfoot hanging to her bill she dashed out of the nest. Possibly she was alarmed by some noise, but I heard none. On the preceding day mistaking her arrival for that of the father I began to open the trap door whereupon she flew out like a flash. For the hapless little creature the ground in ever widening circles was searched fruitlessly during several hours, scarcely a leaf remaining unturned; if it was not killed by its fall to the earth, it perished most miserably.

The study of former Flicker nests revealed the fact that it is the male bird that shows the fearlessness and devotion that we are wont to find more prominent in the mother in most species. Until the cases of starvation in the nest of 1909 occurred great pains had been taken not to disturb the natural activities of the nest; only in taking out and returning the young at weighing time did any one so much as show a hand. At such times the father, eager to return to brooding, frequently came down and touched the hand. This year it was decided to let the hand touch him. To patting and stroking he fearlessly submitted although evidently not relishing it. He suffered the hand to poke under him in taking and returning the nestlings and finally he did not shrink from it when it held up one of the twins for him to feed. This so called tameness, which more truly is the engulfment of fear by the overwhelming instinct to brood and care for the young, gradually disappeared, and by the time the young ceased to need brooding he was as timorous as before. His timidity, however, was far less than that of any other Flicker that has been a tenant of the barn.

Generally the sounds that aroused fear in this species were made by some one back of their nest, yet the bird always sought the hole and looked for the cause of alarm outside. After two seasons of experience with the five-fingered terror that entered the hand-hole so often, and removed their young, they failed to learn to look for any disturbance from that direc-

tion. Another illustration similar to this is the careful inspection of the hole before entering it at night, a Screech Owl or other enemy might be lurking there, and experiences through millions of generations, have created an instinct of caution akin to that racial instinct that leads human beings to search for the hidden enemy, the man under the bed.

It has already been mentioned that this year the male Flicker covered the eggs every night; he also staid with the young every night until they were three weeks old, brooding all of them until nearly two weeks of age, when they began pressing their breasts against the side of the nest, and he could cover the tails of two or three only, after which for two or three nights he sat upon the bottom of the nest apart from the young; then for four nights he hung upon the wall of the nest near the hole; thereafter he staid with them no more. The date of this desertion is coincident with the fledgelings' attainment of the entrance hole, which is the time the parents begin to fail to keep the nest perfectly clean. The parents fed so late in the evening that it was often impossible to identify the brooding bird without the aid of a flash-light lantern; this did not disturb him and he sometimes slumbered on regardless of it.

Pronounced individual characteristics could be recognized in the fledgelings; Blackfoot and Whitefoot were over-bearing little gluttons; Pink was the pert one of the brood; Blue was a spunky little creature, the hardest biter of all; Redfoot was timid and demure, perhaps the early ordeal of cold and hunger had a sobering effect on it. As models for drawing or painting the little Flickers are the best posers of any species I have tried. They have posed for their pictures from one to two hours on occasions when there has been scarcely a movement other than the winking of their eyes.

As the eggs hatched in the order in which they were laid, so the fledgelings went forth in the order in which they were hatched; Blackfoot early in the morning of their twenty-sixth day, Whitefoot and Pink late that afternoon. The next day the father brought at least one meal to Blue and Red-

Hurling a Derisive Yelp

foot, but most of the time they fasted. Late in the afternoon Blue flew from the nest, leaving Redfoot to spend the night alone.

The next morning Redfoot still clung to the hole, although good strong branches swung invitingly only four feet away. For two months and a half the Flickers' nest had claimed more than its share of attention. Of the twenty-five species that have been found nesting on our grounds, more than half of that number had nests there this year. Many of these were advantageous subjects for study, and were demanding attention on that morning of June 30 while the little Flicker timidly lingered. Somewhere in the tree-tops was Blue and the two answered call for call. The hand might still caress the form of the little bird as it hesitated to make the frightful plunge. Finally, at nine o'clock and eight minutes, standard time, there was a flash of feathers, light streamed through the erstwhile darkened hole, for the wilderness of green had enfolded little Redfoot.

Both Whitefoot and Blue were seen and identified on the mornings following their departure from the nest. For six days Redfoot remained in the tops of the maples; sometimes it could be heard crying for food, and sometimes a parent could be seen trying to coax it away. On the morning of July 5 both parents were seen to leave its neighborhood, and it soon flew to an old apple tree, then along a fence: this was its first excursion. Several times thereafter it was identified by means of its crimson badge. For a few weeks all was very quiet in Flicker-land. On July 22 weaning time must have been near at hand, when the parents appeared followed by three youngsters, and one begging for food was pecked a decided refusal by the mother.

On the nights of the eighth, ninth, tenth and thirteenth of August a young Flicker roosted in the old nest box. On two nights in July and two in September the father occupied the west hole. Possibly it was the unusual dryness of the summer that caused him to desert his old lodging-place. I be-

lieve him to be the timid Flicker that began roosting in the west hole in August, 1906, but soon changed to the east hole: that he came again the next summer, and before the middle of July had cleared out a boxful of trash carried in by English Sparrows, but did not begin to roost there until August 3, then, excepting a few nights, was a regular lodger until September 29. By the end of that season he had become quite fearless.

Of all our birds the Flickers are the earliest to retire at night, sometimes going to their lodgings an hour before sundown, the customary time being about a half hour before sunset. Generally they go out soon after sunrise, but on cool autumn mornings they have been known to linger much longer. During a rainstorm in the middle of the day they have been seen to seek their apartments, also in fine weather they have been found there enjoying the seclusion thus afforded. It sounds like a simple matter to say that barring about two dozen nights a certain Flicker roosted in the barn every night from April 19 to October 2, yet this ascertainment involved an examination of the holes from the outside once every evening for six months, sometimes three or four times if the visit be made too early, if too late then a loud clapping of the hands may be insufficient to wake the heavy sleeper, and a sharp blow on the barn wall or a continuous bombardment with any convenient missiles may be necessary to force the lodger to show himself. To examine the boxes from the inside too greatly disturbs the birds. Many unsuccessful attempts were made to see just where and how the Flicker roosted in the box; at last the fearless male furnished the much sought opportunity. Not far from the hole he clung to the upper edge of the siding, and slept with his head turned backward, his bill resting in his interscapulars.

In the summer of 1908 three Flickers roosted in the barn; the one in the east hole was timid, making it difficult to learn of his movements; however, it is certain that he went to roost there at least half of the nights from July 12 to September

25. The next spring a bird of corresponding behavior returned to this hole on April 12 and continued his roost there for almost a month. The bird in the south hole was a regular lodger from the seventh of August to the first of October, excepting two nights when he was frightened away. The occupant of the west hole was the father of the brood raised in the south box, where he took lodgings on April 15 and stayed there the greater part of the time until the young ceased to need his care. This box was cleaned thoroughly as soon as the young had gone out, but apparently it was regarded as the nursery, and not as a sleeping apartment by this Flicker, who returned to his old quarters in the west end on the sixth of July, preferring it to the cooler place in the east end. On some hot evenings he must have found there a temperature of one hundred degrees, the thermometer having shown a mark nine degrees higher two hours earlier. Before July 20 he had failed to come in on four nights, after that he came every night until that of October 2. He was there as usual on the evening of the first of October, whether he began his southward journey at some time in the night or at an earlier hour than he was accustomed to go out, no one can tell. He wore no tag, therefore gave no one a pretext for killing him; he returned in safety the following spring, and this, it is hoped, he may continue to do for many years to come.

Flickers in 1910.

Some points of interest in the summer life of the Flicker, omitted from the preceding paper, together with a resume of the history of this species for 1910, are given in the following pages.

In this portion of northern Iowa the young Flickers meet with few destructive enemies and a goodly number go southward every autumn, yet there appears slight, if any increase, in their numbers when they return in the spring. To each of the old nest sites there returns a pair; these nests in my immediate neighborhood are about a quarter of a mile apart:

outside of the villages every farm-yard, that has suitable trees, usually furnish a home for a pair, but as there are only two or three farms upon a section of land the houses average about a half mile apart. In placing themselves for the summer how large a space does a pair demand?

To provide more roosting places, also to see if more than one pair of Flickers could be induced to nest on our grounds the nest-boxes in the barn have been increased from three to seven. Three springs ago a suitable box was nailed upon a willow tree that stands about twenty-five rods from the barn, and the following spring another was placed in my bird-blind, which is situated near the willow tree. When the Flickers returned in 1910 the last mentioned boxes were occupied by a nesting Screech Owl and her mate, thus once more reducing accommodations to the boxes in the barn, where, as hitherto, but one pair nested.

One determining factor, perhaps the principal one, in the spacing of their homes may be the area necessary for their food collection. The places they usually frequent for food are pasture lands and newly mown fields. With binoculars I have followed the flight of a parent Flicker to the barn from a pasture nearly a half mile distant, while far too many ant-hills existed near at hand. This choice of open and closely cropped fields for feeding may be the chief influence that leads them to seek prairie homes, although thousands of wooded acres stretch along the Mississippi River, their western border being but two miles to the east of us. Besides our barn the only known buildings in the neighborhood inhabited by this species are an ice house, used for nesting, upon a farm three miles distant, and the amphitheater on the county fair grounds, used for roosting, a quarter of a mile away.

The advent of the first Flicker in 1908 was on March 26: for the following spring it was on April 4, while this year it occurred on March 23, and eight days later three of them went to roost in the barn. Among them the tame old male

could not be found; his last journey may have been the long one from which none return. It is hoped that he died full of years, as he certainly did full of honor. The greatness of the debt of gratitude due him was not fully realized until the timidity of his successor made it apparent. The wildness of this bird precluded the former freedom of nest study: and his offspring, either from heredity or example were wilder than any brood of previous years.

The courting in 1910 was conducted by the males, and was a very inconspicuous affair. The mother of the nest is believed to be the same as that of last year. She bore no distinguishing marks, but her familiarity with the place and the readiness with which she took up her roosting quarters in the old west box pointed to this conclusion. The four new boxes had been placed in the southwest corner of the barn, occupying a space that might have been enclosed in a tree two and one-half feet in diameter. The entrances to two of the boxes were on the south side and the others on the west. In the lower box upon the south side roosted the male before the eggs were laid. As has been related the tame old male of recent years was a masterful fellow and rather insisted that the laying should be done in his box. This year the eggs were deposited in the box of neither parent, but in the lower one of the new boxes opening toward the west—a box in which there had been made no demonstrations of choice before the laying began. Here the male at once took up his abode and later performed the usual duties of incubation and brooding.

The first egg was deposited on May 5, a date ten days earlier than that of any year except 1906. On the morning of May 9 the hour of deposition of the fifth egg was six o'clock and ten minutes, that of the sixth egg was five o'clock and fifty-four minutes on May 10, and of the seventh was five o'clock and forty minutes on the following morning. The morning the eighth egg was laid the mother went to sleep several times upon her nest, then sat outside the nest upon a

perch; thinking that the clutch had been completed the watch was discontinued a few minutes after six o'clock. The next morning the nest was not visited until a late hour, hence it was not due to any known disquietude that the female neglected her own nest and laid her ninth egg in the box above, having its entrance fourteen inches to the right and above her nest: there the egg was allowed to remain for nearly a month, when it was probably eaten by one of the pair.

Five of the eggs hatched upon May 22, making a period of nine days from the laying of the last egg, a shorter period than that of any previous nest except that of 1905. Since incubation of a somewhat inconstant nature begins upon the day the sixth egg is laid it was a bit of good fortune that it was the female, instead of the timorous, complaining male, that was at home when the sixth egg broke open at two o'clock and eight minutes in the afternoon of May 22, making its period of incubation twelve days, eight hours and fourteen miuntes, which was exactly two minutes longer than the incubation period for the sixth egg in 1909. The order of the hatching was irregular, the second egg being the fourth to hatch and the first one last.

The number of young reared in these barn nests has invariably been five or six. None died in the nest until 1909, infertile eggs reducing their number to the above figures. This year the last two Flickers hatched, lively little fellows, that struggled hard for food, but apparently received none, died from starvation at the end of their second day. That the father was a poor forager is attested by the daily average of weights of the brood, which, during the latter portion of their nest-life, was lower than any previous records; nevertheless the young began to leave the nest when twenty-five days old, which is earlier than some broods leave. The smallest nestling lingered two days longer; its stay might have been of still greater length if unintentionally it had not been frightened out of the nest about noon of June 18.

Some seasons the parents take their young away from the neighborhood as soon as possible, but in others, as was the case this year, they remain constantly about the place for several weeks until the family ties are loosened. These ties do not appear to be entirely broken during the rest of the summer, there being times when apparently the whole family has a joyful gathering on the roof of the barn, or in the top of a dead willow tree. Again just before their hour for going to roost four or five of them, having found a luxurious bed of dust, disport themselves therein with evidently as keen enjoyment as a duck finds in water. Flickers, like other members of the Woodpecker family, have little use for water. During many hours, all of which taken together would amount to weeks I have watched from a blind a pool of water much frequented by the birds for drinking and bathing purposes. Near it stands the dead willow visited daily by Red-headed Woodpeckers and Flickers; there the former have never been seen to drink, and the latter on two occasions only. The first time it was the tame old male that backed down a fence post to the surface of the water and drank while clinging to the post.

Aside from occasional rather curious exhibitions of courtship the late summer interests in the Flicker center about his food habits, his moult, and his roosting. All seven boxes in the barn have been used for roosting purposes this year, only five, however, at one time. For the first time a female has had a chance to occupy a box after the nesting season was over: formerly she was driven out by the males. In its summer roosts the Flicker is one of the most immaculate of lodgers. When he leaves for the south after several months of occupancy of a box no droppings of any kind can be found there except some of his moulted feathers, remaining as little tokens of the excellent bird that spends just half of the year as a sharer of our home. But in the nesting boxes some signs of the Flicker's inhabitancy are permanent: these are the places hewed by their chiseling bills. In the last box

used this was very slight, in the south box where they nested for two seasons a hole as large as a half dollar was made through the half inch boards, which would have formed an opening into the barn if it had not been for the batten back of it. It is in the old east hole occupied for so many years that this hacking is most prominent. Below the entrance hole the siding of the barn in places has been hollowed out to half its original thickness, and the board parallel to the rafters, that helped form the cavity, has been cut half way through in that portion of it that is opposite the hole. Evidently this was done to enlarge the space; the other cuttings probably are the result of the bird's natural tendency to enlarge its nesting chamber while sitting, or it may originate from the bird's habit of hammering with its bill at such times. This hammering, which is often heard before the eggs are laid, seems to be a call, and when done while the bird is incubating it may be for the same purpose, since it appears to be indulged in toward the close of a long sitting, when the bird shows signs of restlessness by frequently going to the hole to look out.

Flickers from the Brood of 1903

Weights of Flickers
Brood of 1908

Egg		No. 1	No. 2	No. 4	No. 5	No. 6	No. 7	Aggregate weight of brood	Average daily weight
weight of egg-fresh		GRAINS 98	GRAINS 106	GRAINS 106	GRAINS 109	GRAINS 107	GRAINS — —		
weight of egg-hatching			95	98	101		100		
					JUST HATCHED				
1st to 28th day in life of the Flickers	1	89	89	89	85	84	84		
	2	171	159	155	154	129	120	888	148
	3	238	215	213	211	200	180	1257	209
	4	338	331	329	310	309	292	1909	318
	5	486	434	429	409	400	397	2555	425
	6	578	576	568	550	537	503	3312	552
	7	760	742	678	660	628	611	4074	679
	8	940	859	767	743	739	710	4758	793
	9	1026	911	867	850	830	825	5309	884
	10	1207	1045	1042	1008	992	901	6195	1032
	11	1427	1318	1239	1151	1116	1005	7256	1209
	12	1540	1321	1313	1218	1194	1140	7726	1287
	13	1828	1324	1303	1300	1223	1143	8121	1353
	14	1619	1506	1380	1186	1079	1006	7776	1296
	15	1715	1565	1500	1394	1315	1143	8634	1439
	16	1629	1568	1526	1515	1377	1248	8863	1477
	17	1766	1685	1657	1631	1501	1247	9487	1581
	18	1775	1670	1669	1657	1555	1506	9832	1638
	19	1767	1707	1699	1640	1550	1500	9863	1643
	20	1834	1830	1756	1565	1558	1436	9979	1663
	21	1805	1756	1730	1658	1564	1442	9955	1659
	22	1960	1944	1774	1721	1569	1540	10508	1751
	23	1821	1806	1780	1754	1686	1565	10412	1735
	24	1935	1878	1744	1701	1669	1557	10484	1747
	25	1859	1830	1829	1694	1682	1645	10539	1756
	26	1846	1825	1755	1736	1642	1581	10395	1732
	27	1679	1575	1544	1535	1503	1500	9436	1572
	28				1530	1430	1419		

Apothecaries' weight was used and for convenience all weights were kept in grains. The young of this brood were not marked, consequently their weights were placed in the order of their size.

Weights of Flickers
Brood of 1909

Egg		No. 1	No. 3	No. 5	No. 6	No. 7	No. 8	No. 9	Aggregate weight of blood	Average daily weight
weight of egg-fresh / weight of egg-hatching		grains 110 / 88	grains 108 / 95	grains 108 / 96	grains 106 / 93	grains 109 / 96	grains 111 /	grains / 95		
		Black-foot	White-foot	Pink	Blue	Gray-foot	Red-foot	Baby		
1st to 28th day in life of the Flickers.	1	85	85	83	84					
	2	197	173	164	156	117	116	83	1006	143
	3	286	257	244	210	193	176	113	1479	211
	4	426	370	346	332	302	296	202	2274	327
	5	428	413	405	362	354	324	230	2516	358
	6	606	516	500	422	396	314	184	2938	419
	7	666	534	489	440	404	303		2836	472
	8	855	725	643	623	554	413		3813	625
	9	1104	847	830	712		697		4190	838
	10	1260	1118	1154	1048		936		5516	1103
	11	1410	1267	1218	1210		1081		6186	1237
	12	1604	1330	1297	1286		1208		6725	1345
	13	1647	1590	1540	1410		1352		7539	1507
	14	1680	1602	1594	1436		1511		7823	1564
	15	1855	1790	1782	1634		1666		8727	1745
	16	1882	1832	1834	1574		1730		8852	1770
	17	1958	1966	1765	1635		1635		8949	1789
	18	1964	1990	1837	1746		1731		9178	1835
	19	1929	2105	1867	1732		1783		9416	1883
	20	2100	2016	1968	1808		1902		9794	1958
	21	2012	1966	1824	1698		1855		9355	1871
	22	2115	2037	1920	1866		1969		9907	1981
	23	2150	2079	1954	1806		1871		9860	1972
	24	1980	1920	1858	1846		1954		9558	1911
	25	1950	1975	1869	1788		1900		9482	1896
	26		1990	1794	1823		1745			
	27				1640		1811			
	28						LEFT NEST			

The egg of the twins here marked No. 7 hatched first, hence thought to be the earlier egg. Red-foot left the nest before it was weighed on its twenty-eight day.

Weights of Flickers Brood of 1910

Weight of eggs -fresh.- No.1-97grs. No.2-104grs. No.3-109grs. No.4-113grs. No.5-112grs. No.6-113grs.								*Aggregate weight of brood*	*Average daily weight*
		GRAINS	GRAINS	GRAINS	GRAINS	GRAINS	GRAINS		
1st to 28th day in life of the Flickers	1	101	100	88					
	2	200	194	177	169	150	112	902	150
	3	295	279	270	267	175	137	1423	237
	4	418	396	375	340	275	199	2003	334
	5	525	514	488	480	400	327	2834	472
	6	686	603	579	554	505	390	3317	553
	7	796	734	719	695	637	490	4071	678
	8	871	832	795	793	647	601	4539	751
	9	968	964	945	920	748	681	5226	871
	10	1183	938	1026	1078	906	880	6011	1001
	11	1242	1227	1204	1133	976	969	6751	1125
	12	1385	1248	1241	1256	1244	1175	7549	1258
	13	1429	1271	1274	1455	1182	1140	7751	1291
	14	1531	1543	1375	1342	1173	1120	8084	1347
	15	1745	1634	1529	1495	1417	976	8796	1466
	16	1725	1568	1627	1617	1302	1148	9187	1531
	17	1595	1625	1613	1523	1519	1265	9140	1523
	18	1614	1559	1426	1581	1615	1270	9065	1510
	19	1639	1579	1535	1563	1481	1305	9102	1517
	20	1846	1656	1614	1665	1513	1396	9690	1615
	21	1800	1639	1625	1616	1440	1486	9606	1601
	22	1687	1648	1672	1565	1483	1492	9547	1591
	23	1722	1676	1665	1694	1519	1536	9812	1635
	24	1758	1685	1729	1653	1492	1479	9796	1632
	25	1725	1670	1643	1627	1571	1457	9693	1615
	26						1462		
	27						1494		
	28						LEFT NEST		

The smallest one left the nest on its twenty-eighth day while attempting to take it out for its daily weighing. The young of this brood wore distinguishing marks.

THE BIRDS OF CEDAR POINT AND VICINITY.

BY LYNDS JONES.

221. *Oporornis formosa.*—Kentucky Warbler.

At best an irregular spring migrant. Probably the venturesome males which over-reach the migrating host during the height of the fever of spring migration retire southward when no mates appear. Records for the immediate vicinity of Oberlin are: May, 12, 1903; May 15, 1906; May 13, 1907; May 14, 1908; one on each occasion. Cedar Point sand spit records are April 27 and May 23, 1904; May 13, 1907, two birds; these records are actually for the marsh at Rye Beach, at the extreme east end of the series of marshes. The birds have always been found in wet or swampy situations, always near the ground on some fallen wood. The increasing frequency of occurrence in later years gives me hope that this interesting warbler may ultimately become a summer resident and enliven our woods with his rich melody.

222. *Oporornis agilis.*—Connecticut Warbler.

A spring migrant in small numbers, never having been noted in fall. The migration dates fall within the last two weeks of May, with the exception of May 7 and 9, 1904. These early dates would indicate that this warbler belongs in the early May group rather than among the latest of the migrants. I have invariably found it in places of which the marsh border of the sand spit is typical—in the vicinity of water. It has been heard singing but once, then faintly.

223. *Oporornis philadelphia.*—Mourning Warbler.

A spring migrant in small numbers, but decidedly more numerous than the last species. The median date of arrival for nine years is May 11, and of departure northward, May 25. It has never been found in fall. The typical habitat of this bird while it tarries with us is a low, wet place, thickly grown with rose bushes. Along the sand spit it frequents the button bush thickets along the marsh border. It seldom sings during its passage.

224. *Geothlypis trichas brachidactyla.*—Northern Yellow-throat.

Common all summer in growths which accompany wet or damp situations, whether the growths be of grass, weeds, reeds, or bushes. The marsh border of the sand spit, and the grassy "islands" are therefore typical habitats. The median date of arrival is April 30, the range being from April 25 to May 2. The median date of departure is September 23, the last being October 1, 1906, at the

Cedar Point sand spit. The bulk is gone by the middle of September usually. Nests have been found May 30. While there is considerable variation in the rendition of the song, each bird being able to vary its song to a considerable degree, the song pattern is so distinctive that novices have little difficulty in learning it. As one might readily infer, this warbler is present on the larger islands where typical habitats are plentiful.

225. *Icteria virens.*—Yellow-breasted Chat.

A summer resident which is increasing in numbers year by year. Nearly every brushy tangle now harbors a pair. When my studies of the birds of the region began in 1891 it was not easy to locate a pair outside of two or three favored localities. Several pairs nest along the sand spit. Three pairs nested within twenty rods of the Lake Laboratory in the summer of 1907. The median date of arrival is May 5. My latest fall record is September 9, 1899. There were three young found in a nest on August 6, 1897. The birds become silent and apparently slip away south without attracting attention. My visits to Pelee Island have been too late in the season for it. There can be little doubt that it nests there.

226. *Wilsonia mitrata.*—Hooded Warbler.

The first record for the region is May 9, 1901, when two were found singing in the old "South Woods." None were found the following year, but since 1903, when one was found on May 9 and another on May 22, both in the "South Woods," it has been regularly recorded, seldom more than one at a time. It certainly does not remain to breed. It has been found well toward the east end of the sand spit about the middle of May. Apparently individuals do not work much westward. There are no summer nor fall records.

227. *Wilsonia pusilla.*—Wilson's Warbler.

Fairly regular as a spring migrant in limited numbers; recorded but twice in fall. It ranges along the sand spit in the bushes bordering the sand plains. On the mainland it frequents the brushy borders of woods and the smaller growths of the woods. It does not sing much during its stay. The median date of spring arrival is May 13, and of departure northward May 20, the latest spring record being June 2, 1903. The fall records are September 8, 1904, one bird; September 14, 1906, three males in high color, and two birds in immature plumage. One of the remarkable things about this region as contrasted with central Iowa, is that this warbler passed south in swarms in Iowa and is practically absent in fall here.

228. *Wilsonia canadensis.*—Canadian Warbler.

Common during the spring migrations in the more open woods, especially beech woods. Only once noted in fall. It has been common along the sand spit during each migration which I have studied there in spring. The median date of arrival is May 8, and of departure May 23. In 1901, 1904 and 1907 it tarried until May 27. The fall occurrence was September 7, 1901, one bird. It will be interesting to compare records on Pelee island with those from the Oberlin region for the fall weeks.

229. *Septophaga ruticilla.*—Redstart.

Everywhere common in the woods of the mainland, and on the larger islands, as a summer resident. In moderately large second growth beech woods it is even abundant. The median date of arrival is May 1. It is often common from the first. I have found nests with young June 1. The latest fall record is October 7, 1907, when three individuals were noted. It is not uncommon along the sand spit in the spring migrations, but is uncommon or absent in summer. I did not find any in the summer of 1907. In its passage northward it comes into towns and parks, singing almost incessantly.

230. *Anthus rubescens.*—Pipit.

Regular but seldom common as a spring migrant, irregular in fall. Always seen in flocks numbering from a few individuals to several hundred, and most often found on freshly plowed fields in spring, where it is feeding. Flocks have been seen flying over the sand spit and marsh, both spring and fall. The median date of spring arrival is May 4, but the range is from March 23, 1907, when a flock of 15 was noted, to May 26, 1899, which is the latest spring record. Fall records range from September 14 to October 19. Clearly these records are too variable to afford any clue to the usual times of migration, if there be any. Flocks of Pipits can be readily distinguished from flocks of the larks or any other flocking birds by their erratic flight and by the vertical criscrossing of the individuals of the flock.

231. *Mimus polyglottos.*—Mockingbord.

The only absolutely authentic record is of a specimen in the possession of Mr. R. E. Jump, who captured it at Oberlin, date not known. Professor Edward Dickinson, who knows the bird well, reported one seen and heard singing by him near Oberlin in May, 1908. Persistent reports of its occurrence near Cleveland, and its evident increase in numbers southward in the state, lead one to hope that it is gradually extending its range well northward.

232. *Dumetella carolinensis.*—Catbird.

Common all summer in bushy situations. It is a familiar bird in door-yards if the back lots furnish suitable breeding places. In the borders of woods it seems to prefer to nest in hawthorn trees. It is one of the most familiar birds about the Lake Laboratory, and all along the sand spit, where it nests in great numbers. The median date of arrival is April 27. The latest fall record is October 16, 1905. The most of the birds have gone south by the first week in October. It seems strange that there are still persons who regard the Catbird as a witch, and who destroy its nest and young on every opportunity. Unlike the Brown Thrasher, this bird prefers the seclusion of a tangle from which to sing. In my opinion its ventriloquil powers have been a good deal overstated. It has some powers of mimicry, but it also has its own song pattern, to which it is inclined to adhere pretty closely.

233. *Toxostoma rufum.*—Brown Thrasher.

Far less common than the preceding species, except during the spring migration along the sand spit, when it is usually almost abundant. Its proper setting in this region is an osage orange hedge-row, at least during the nesting season. It also frequents brushy woods and neglected fence rows. Along the sand spit it is pretty closely confined to the bushes, nesting about the Lake Laboratory. The median date of arrival is April 11, but there are four March records, the earliest being March 22, 1902 and 1904. One individual remained in Oberlin all winter 1906-7. The latest fall date is October 16, 1905. It has not seemed to be present along the sand spit with the advent of fall weather, much to my surprise. Its spring arrival is heralded by a burst of song, which the bird pours forth from the topmost point of an osage orange plant. In snowy weather it retires to the brush and becomes silent. Nests are most numerous in the osage orange hedge-rows, but the birds occasionally build elsewhere. One pair successfully reared a brood of five in the midst of a brush heap in a hog pasture, in 1909.

234. *Thryothorus ludovicianus.*—Carolina Wren.

The first authentic record for this wren is September 6, 1899, at Chance Creek, in the eastern part of the Vermilion quadrangle. Since that time there has been a gradual increase, until today there is no river gorge which does not harbor several pairs. It has been found in winter and spring on the sand spit, particularly about the resort grounds, but also eastward and near the Lake Laboratory. I have found it on East Sister and Pelee Islands, where permanent colonies seem to have been established. It has not yet become nu-

merous enough to dare breeding about human habitations, but each spring it is heard singing in Oberlin. Three pairs regularly nest in the Vermilion river gorge at Birmingham.

235. *Thryomanes bewickii.*—Bewick's Wren.

May 22, 1909, one was heard singing at Berlin Heights by Rev. W. L. Dawson and the writer. There are other conjectural records, one for Elyria and one for Oberlin, but on neither occasion were the circumstances sufficiently favorable to warrant positive statements.

236. *Troglodytes aedon.*—House Wren.

A common summer resident in orchards, but much less common in woods and about barns in town. The median date of arrival is April 24. It seems to leave the vicinity of its nesting places rather early in September, but I found it in considerable numbers along the marsh border of the sand spit as late as October 15, 1906. There it was acting so much like a Winter Wren or one of the marsh wrens that one had to be sacrificed to make identification satisfactory. There is no bird more useful in an orchard than one of these wrens, and owners of orchards will do well to either leave hollow limbs for them to use, or supply boxes or other receptacles in which they may build

237. *Nannus hiemalis.*—Winter Wren.

Of regular occurrence in winter, but irregular in its fall arrival. My dates range from September 14 to October 18 for firsts. The median date of spring departure is May 8, but the latest record is May 17, 1898. The bird seems to prefer an old brush heap or a fallen log which is partly covered with brush and vines, or is hollow. On the sand spit it is found near the marsh border among the bushes. I have never found it there in the dead of winter. It sings sweetly in its brushy retreat in spring, or scolds in a tempest of harsh rattling calls.

238. *Cistothorus stellaris.*—Short-billed Marsh Wren.

This little wren escaped notice until May 12, 1900, when one was found in a small swamp south of Oberlin, and another one in the quarry region north. Since that time it has been found in small numbers in the grassy borders of the marshes at the lake, including Cedar Point, all summer. It arrives about the first of May. I have no fall or late summer records. As indicated, its proper setting is the coarse grass which grows at the borders of marshes, or in low, damp situations.

239. *Telmatodytes palustris.*—Long-billed Marsh Wren.

Abundant in all of the larger marshes all summer, and a few pairs are to be found in most of the smaller marshes. This wren belongs to the cat-tail zones of the marshes, always placing its nest above water among the cat-tail stems and reeds. The median date of arrival is April 22 at Cedar Point, where the only reliable records can be secured. I found it there on November 19, 1906, and October 21, 1907. I am of the opinion that it remains in the marshes until the approaching cold forces it southward by reason of scarcity of food. It is just as characteristic of the marshes in summer as are the marsh vegetation and water.

240. *Certhia familiaris americana.*—Brown Creeper.

Often common in the migrations, regular in small numbers all winter. The spring migration occurs about the 20th of April. The median date of spring departure is April 29, and of fall arrival, October 2, but fall records are too variable to make positive statements possible. It has been found in considerable numbers in both migrations along the sand spit. The proper setting for this bird is the deeper woods in winter, and any place where there are trees during the migrations. It wanders about with the troops of small birds in winter.

241. *Sitta carolinensis.*—White-breasted Nuthatch.

Common all the year wherever there are trees. It is a regular visitor to the lunch counter in winter, and is a most efficient help in the orchard at any time of year. In winter it is usually the first of the wandering troop to respond to the chickadee call. It is present, but not numerous, on the sand spit at any time. I found it on all of the larger islands.

242. *Sitta canadensis.*—Red-breasted Nuthatch.

Decidedly irregular in its occurrence. It is usually tolerably common on the wooded parts of the sand spit in the spring migrations, and usually present all winter on the mainland, in small numbers. It is sometimes common in the migrations in April and early May, and again in early September, but more frequently is represented by a few individuals. It is to be found in the deep woods in winter, anywhere where there are trees at other times.

243. *Bæolophus bicolor.*—Tufted Titmouse.

Tolerably common over the whole wooded parts of the mainland region, all the year. I have not found it on the islands. It is found on the sand spit in small numbers. In winter it ranges along the sand spit, but in summer seems to be confined to the west end.

It is less frequently seen in town than the next species in winter, but singing males regularly visit the college campus during the courting season. This is one of the species always comprising the winter troop of small birds in woodlands. It readily responds to its imitated calls, but is more wary than the Chickadee. It seldom visits the lunch counter in winter.

244. *Penthestes atricapillus.*—Chickadee.

Common over the whole wooded and inhabited parts of the region all the year. It is less common on the sand spit during the coldest part of the winter. It nests in orchards where suitable nesting sites are left. Its confiding habits make it the favorite among our resident birds. The lunch counter is patronized with thanks and the birds proceed to pay their way by visiting the orchard and destroying the eggs of the apple pests.

I have never been able to detect any migration of these two titmice in this region at any time of year. They are decidedly local in their preferences, and can be located even when nesting. On numerous occasions I have started them from their night roost in the thick of a leafy grape vine in midwinter

245. *Regulus satrapa.*—Golden-crowned Kinglet.

Common during the spring migration, less often common in the fall; wintering in small numbers in cemeteries and other places where there are evergreen trees. In the migrations it occus over the whole region where there are trees and bushes. It was common September 24 to October 23, and a few to November 5, 1906; common March 25 to April 29, 1907, on the sand spit, but I have not found it there in winter. The spring migration occurs the first week in April, and the bulk has departed before the first of May. My latest spring date is May 10, 1907. The fall migration occurs about the first of October, the earliest being September 24, 1906. The bulk has gone south by the first of November.

246. *Regulus calendula.*—Ruby-crowned Kinglet.

Common in the spring migrations, less common in the fall. It is found with the last species, but tarries longer in the spring. I have never found it in winter. The median date of spring arrival is April 13, the earliest being March 25, 1905. The bulk leaves about the first of May, but individuals tarry until May 18 (1907 and 1908). The fall migrations occupy the whole of October. Extreme dates are September 24, 1906, and November 3, 1901. Sometimes these little birds literally swarm over the bushes in the yard and among the apple trees. Rival males display the hiden flame

until one imagines the whole head is fire red. At other times it is hard to see the concealed red at all. Those who have difficulty in distinguishing the immature kinglets from some of the plainly colored small warblers may do so readily by noting the nervous flitting of the wings of the kinglets.

247. *Polioptila caerulea.*—Blue-gray Gnatcatcher.

Regular as a summer resident, but not common. It is partial to beech or oak woods during the nesting season, but may be found anywhere in woodland where the growth is not too dense, during the migrations. It has been common on the sand spit during the days of heavy migration, more common eastward where the width of forest growth is less. The median date of migration in spring is April 23, but the earliest is March 29, 1907. I have never seen this bird after August 15 (1899).

248. *Hylocichla mustelina.*—Wood Thrush.

Common in woodland all summer. It is also a familiar bird in Oberlin back yards and orchards, where it nests. It seems to prefer thick second growth woods, or the lower borders of larger woods. It has always been common during the spring migrations on the sand spit, but it nests sparingly west of the resort grounds, near the Lake Laboratory, and on one of the considerable widenings of the sand spit a half mile east of the Lake Laboratory. The median date of spring arrival is April 27, the earliest being April 10, 1904. My latest fall record is September 24, 1906. I have not found it on the sand spit in late summer and early fall, nor have I noted any southward migration of considerable numbers, which would be the case did the more northerly breeding birds pass southward across this region. Nests containing eggs have been found by May 22. This bird is *par excellance* the nightingale of our woods. To its singing in Oberlin is probably due more than to any other one thing the awakening interest of middle-aged people in the bird life of the town. One can hardly remain indifferent to his surroundings after having heard the song of the Wood Thrush.

249. *Hylocichla fuscescens.*—Wilson's Thrush.

Common in the spring migrations in suitable woods, a few remaining all summer to breed. The Cedar Point sand spit does not seem to furnish the necessary conditions for this thrush. It has been met with there in small numbers during the migrations, but has never been found in such numbers as to be called common. The typical habitat in this region is a woods of tall trees which stand close enough together to furnish a complete shade, with a little un-

derbrush or berry bushes. Woods of this character are not numerous. Its associations are with the Wood Thrush and the Oven-bird in summer, and with the Hermit and Wood Thrushes in the spring migrations. The median date of spring arrival is April 29, the earliest record is April 20, 1899. I have no reliable fall records. There has never been any fall movement noted.

250. *Hylocichla alicia*.—Gray-cheeked Thrush.

Prior to 1898 the problem of distinguishing this thrush from the next had not been solved. Since that time it has been found fairly common in the spring migrations, but irregular in the fall. It has always been found associated with the next species, and the general remarks will be given under that heading. The median date of spring arrival for seven years is May 2, and of departure, May 19. Fall records indicate that it returns near the first week of September and remains a month.

251. *Hylocichla swainsonii*.—Olive-backed Thrush.

This is decidedly the most numerous of the thrushes in the migrations, both spring and fall. Probably because of its numbers it is to be found anywhere that trees grow. The Cedar Point sand spit seems to be a line of migration in spring, and my few experiences on the chain of islands indicate that the island route is abundantly patronized in the fall. The song of this thrush is heard in town, parks, and door-yards during the stress of the migration, where the birds often swarm in the tree-tops and among the shrubbery. On the sand spit they are everywhere, and during the migration of the Sharp-shinned Hawks, suffer from the depredations of this hawk greatly. The median date of migration is, for the northward movement, April 30, the earliest being April 13, 1908; for the departure north, May 25, the latest being June 13, 1905. The median date of return in the fall is September 13, and the departure southward October 4, the latest being October 24, 1896. They usually remain common up to the day of their departure, both spring and fall. On the day of my arrival on Pelee island, August 29, there were none found, nor any the next day in spite of a careful search, but with the first faint dawn of the 31st the peculiar notes of this bird were heard, and the full light revealed hundreds of them in the bushes and everywhere in the woods. They remained thus numerous until my departure the evening of the next day, and were common on Middle and Kelley's islands.

252. *Hylocichla guttata pallasii.*—Hermit Thrush.

Always present, but not always common, during the spring migration, and practically always present during the fall migration, always in the woods or door-yards which have trees or bushes. It has been common on the sand spit in each migration that I have studied the birds there, and usually so numerous that the birds spread well over the whole of the sand spit. The median date of spring arrival is April 2, the earliest March 21, 1903; the median date of spring departure is May 5, the latest May 20, 1907. The birds usually return late in September and remain about a month. One was found in the thicket covering an old quarry dump on December 4, 1903, in the Oberlin quadrangle. This thrush seldom sings during its passage, and then apparently only the ghost of the song which is characteristic of its summer home.

253. *Planesticus migratorius.*—Robin.

Always abundant during the migrations, and common in the vicinity of human habitations during the summer. It might rightly be termed abundant in towns. It has not been really common on the sand spit in the summer, and is usually not as numerous there in the migrations as it is on the mainland on the same dates. In the spring migrations it sometimes forms into great flocks. The median date of spring arrival is February 28, the earliest for actually migrating birds being February 14, 1897. The great southward migration occurs late in October, with the first touch of winter. Since the winter of 1894-5, when the great storm in Kentucky and Tenessee killed countless numbers of this and the next species, Robins have been found in this region all winter in small numbers. Several regularly pass the winter in Oberlin. Nest building is in progress late in March, and two or three broods are raised.

254. *Sialia sialis.*—Bluebird.

It is a common summer resident over most of the region, and has been so except during the years immediately following the disastrous winter of 1894-5, when most of those which passed the winter in Kentucky and Tennessee were exterminated. During the last ten years a few individuals have been regularly found all winter in the region. They nest in the more open country in fence posts, in orchards, less commonly in the woods, and less commonly about human habitations than before the thinning. On but two occasions have I seen anything like a great migration wave, and then in the middle of March after two weeks of unfavorable weather. Then the woods near the lake shore were filled with Bluebirds, which seemed to be moving eastward along the lake

in bands of several hundred each. The median date of spring arrival is February 27, the earliest being February 17, 1897; the median date of departure is October 25. The bulk moves south about the middle of October, or with the first severe frosts. Only a few breed on the sand spit, and I have never found many in the migrations.

ONE DAY'S OBSERVATION OF NORTHERN NEW JERSEY BIRDS.

BY LOUIS S. KOHLER.

Appended hereto will be found a list of birds observed in several Northern New Jersey towns on May 26, 1910. This date in this locality is one that may be included in the last leg of the vernal migration period, and, also, one on which an observer may locate a number of species nesting. The country canvassed in securing this list includes Bloomfield, in Essex County, Mountain View, Wayne, Pompton and Pompton Plains, in Morris County, Pompton Junction and Pompton Lake, in Passaic County, and Oakland, in Bergen County. This list includes thirty-eight established residents, five late migrants and five casual visitors, making a total of forty-eight species observed.

ESTABLISHED RESIDENTS

(1) *Actitis macularia.*—Spotted Sandpiper. One seen at Bloomfield.

(2) *Accipiter velox.*—Sharp-shinned Hawk. One seen at Bloomfield.

(3) *Coccyzus americanus.*—Yellow-billed Cuckoo. Two seen along west shore of Pompton Lake.

(4) *Ceryl alcyon.*—Belted Kingfisher. Common at Pompton Lake and Pompton Junction.

(5) *Colaptes auratus luteus.*—Northern Flicker. Common at Pompton Junction and Oakland. Few found at Bloomfield and Wayne. Nest found at Pompton Lakes.

(6) *Chætura pelagica.*—Chimney Swift. Common generally. Nest and four eggs found in chimney at Pompton Junction.

(7) *Tyrnnus tyrannus.*—Kingbird. Common at Pompton Junction and Pompton Lakes. One at Mountain View.

(8) *Sayornis phœbe.*—Phœbe. Two at Pompton Lakes with nest and three eggs.

(9) *Horizopus virens.*—Wood Pewee. One at Pompton Lake.

(10) *Empidonax minimus.*—Least Flycatcher. Common generally.

(11) *Cyanocitta cristata.*—Blue Jay. Common at Bloomfield and Pompton Junction.

(12) *Corvus brachyrhynchos.*—American Crow. Common at Mountain View. Few found at Wayne and Pompton Junction.

(13) *Sturnus vulgaris.*—Starling. Common at Bloomfield. Nest with three young birds about ready to leave nest.

(14) *Molothrus ater.*—Cowbird. Abundant at Pompton Lakes.

(15) *Agelaius phœniceus.*—Red-winged Blackbird. Common at Wayne.

(16) *Sturnella magna.*—Meadowlark. Common generally.

(17) *Icteria spurius.*—Orchard Oriole. One at Pompton Lake.

(18) *Icteria galbula.*—Baltimore Oriole. Common generally. Nest and eggs at Pompton Junction.

(19) *Quiscalus quiscula.*—Purple Grackle. Small flock at Pompton Plains.

(20) *Astragalinus tristis.*—American Goldfinch. Abundant at Pompton Lakes and Pompton Junction.

21) *Spizella socialis.*—Chipping Sparrow. Common at Bloomfield.

(22) *Spizella pusilla.*—Field Sparrow. Common at Pompton Lakes. Several at Pompton.

(23) *Melospiza cinerea melodia.*—Song Sparrow. Common generally. Young birds found at Wayne, Pompton and Pompton Lakes.

(24) *Pipilo erythrophthalmus.*—Towhee. Abundant at Pompton Junction.

(25) *Zamelodia ludoriciana.*—Rose-breasted Grosbeak. One at Mountain View.

(26) *Cyanospiza cyanea.*—Indigo Bunting. Common generally.

(27) *Piranga erythromelas.*—Scarlet Tanager. Abundant at Pompton Junction.

(28) *Hirundo erythrogastra.*—Barn Swallow. Common generally. Nest and three young at Pompton Junction

(29) *Iridoprocne bicolor.*—Tree Swallow. Abundant at Pompton Lake.

(30) *Riparia riparia.*—Bank Swallow. Common at Pompton Lake. Nesting at Oakland, N. J.

(31) *Virco olivaceus.*—Red-eyed Vireo. Common generally. Nest and eggs at Bloomfield.

(32) *Vireo flavifrons.*—Yellow-throated Vireo. Abundant generally.

(33) *Dendroica æstiva.*—Yellow Warbler. Abundant generally. Nest and three young at Bloomfield.

(34) *Geothlypis trichas.*—Maryland Yellow-throat. Abundant generally.

(35) *Setophaga ruticilla.*—American Redstart. Common at Pompton Junction.

(36) *Galeoscoptes carolinensis.*—Catbird. Common at Pompton Lakes. Several found in Oakland.

(37) *Hylocichla mustelina.*—Wood Thrush. Common at Bloomfield and Pompton Junction. Nest and three eggs at Pompton Junction.

LATE MIGRANTS

(39) *Dolichonyx oryzivorus.*—Bobolink. One at Wayne. Two at Bloomfield.

(40) *Zonotrichia albicollis.*—White-throated Sparrow. Common at Bloomfield.

(41) *Dendroica pensylvanica.*—Chestnut-sided Warbler. One at Bloomfield.

(42) *Seiurus aurocapillus.*—Oven-bird. Three at Bloomfield.

(43) *Wilsonia mitrata.*—Hooded Warbler. One at Bloomfield.

CASUAL VISITORS

(44) *Pandion haliaetus carolinensis.*—American Osprey. One at Lake Inez, Pompton Lakes.

(45) *Gallinago delicata.*—Wilson's Snipe. One at Bloomfield.

(46) *Zenaidura macroura.*—Mourning Dove. One at Wayne. Was formerly a casual resident, but quite rare now.

(47) *Vireo gilvus.*—Warbling Vireo. One at Lake Inez, Pompton Lakes.

(48) *Sitta carolinensis.*—White-breasted Nuthatch. One at Pompton Lakes.

THE END OF THE NIGHT.

It was night. No one was stirring in the village streets. A few brilliant stars gleamed from out the black sky. The late rising moon was still hid behind a massive bank of clouds piled up in majestic serenity on the eastern horizon.

I started home, afoot. It was five miles, but what cared I? Delicious memories of the blissful hours just over were

nestling among the cushions of my brain, and, often, I had walked much farther. In the fields around me and in the air above me, I could hear the calls of the night birds. Everywhere was the cry of the kildeer and the plaintive *peet weet* of the woodcock probing for worms in the wet fields. Overhead the night-flying migrants kept calling to one another; but not a bird could I see.

A light wind began to blow. I heard a wild, mournful, agonized, soul-piercing scream, followed by a miserable, high-pitched, it's-all-up-with-me groan. "What in thunder?" There was no way past but by, and I am always interested in ghosts; so I tramped on until I could distinguish the wheel of a farmer's windmill revolving with "soul-piercing" shrieks for grease.

Just at three o'clock, the moon flipped up from behind her vapory screen of clouds, and, at the same moment, a song sparrow in a bush by the roadside, woke with a jerk and started off in the middle of his song. Just why he began in the middle, I do not know, unless he had been dreaming and woke with the song on his mind, or he was still so sleepy that he could think only of the last part of it.

On I tramped, thinking of this and other things, until a robin began to carol his matutinal hymn from a fence post; the vesper sparrows chanted their matins, and the dickcissel began the monotonous rehearsal of his unmusical lays, which he repeats all through the long summer days. The cock's shrill clarion re-echoed from every chicken-coop, and the flute-like whistle of the meadowlark was the avian bugle-call for breakfast. From the woods beside the road came the energetic *wichity wichity* of the Northern yellowthroat, the earnest song of the indigo bunting, and the sleepy call of the wood pewee. The sky grew lighter and lighter, and all the robins of the neighborhood seemd to have united for one grand concerto, assisted by the tuneful song sparrow and monotonous chippy. As the regal sun swung up over the horizon in gorgeous state, it was greeted by a tinkling burst

of the golden song of the bobolink. Then joined the chorus the full-voiced melody of a farmer calling his swine. And the day was begun.

Ada, Ohio. WHEELER MCMILLEN.

THE BOBOLINK.

The metallic *tink* of the bobolink,
As he passes o'er at night,
Is the signal gong of the coming throng,
In their long-continued flight,
From the tropical rains of Brazilian plains
To their northern nesting site.

The manifold charms of buckeye farms
Have drawn him away from the land
Of beautiful flowers and verdant bowers
That were built by the unseen hand.
Soon, the fairy god's dart will pierce his gay heart,
And his little brown mate and he
Will build them a home, a glorious throne,
In a kingdom of musical glee.

In rapture he sings and the meadow-land rings
With a medley of golden notes;
They flow from his throat and onward they float
Like a fleet of æolian boats.
They tunefully tinkle as their melodies sprinkle
O'er the landscape far and near;
They jauntily jingle as they merrily mingle
With the summer atmosphere.
In sunshine or rain, ever free from all pain,
He pours forth his rhapsodies,
Over meadow and field, where with lips unsealed,
The daisies are kissed by the breeze.

Ada, Ohio. —*Wheeler McMillen.*

PRELIMINARY LIST OF THE BIRDS OF ESSEX COUNTY, NEW JERSEY.

BY LOUIS S. KOHLER.

Essex, New Jersey's most populous county, is located in the north-east central portion of the Garden State. Topographically the entire county gradually rises from the Passaic River, its eastern boundry, westward to the first and second ranges of the Orange Mountains, and beyond these low lying hills it slightly declines to the Passsic River again which also forms the western and half of the northern boundaries. At the extreme northern end of the county there is located an immense tract of marsh land which is known as the Great Piece Meadows. To this latter section the local observer must look to find the representatives of the gulls and ducks and such other water birds which are present during their seasons, as there are but three small ponds and two or three small brooks in the whole county and these are not often visited by the water birds.

The greater part of the territory here not occupied by the residential and farming districts, is covered by virgin frowths of deciduous timber with one or two small copses of the coniferous appearing in the Orange Hills.

The faunal areas represented are principally Alleghanian and Carolinian. Occasionally Hudsonian and Canadian species visit us but their stays are usually limited. The following list is compiled from observations made by the writer from January 1902 to the present time and only includes those species to which no doubt may be attached as to their legibility of their being considered in the compilation:

(1) *Rissa tridactyla.*—Kittiwake. Rare migrant. A flock of twelve were seen migrating over northern Bloomfield on February 22, 1903. The birds alighted for a few moments on Davey's Pond and I obtained an excellent view of same and positively determined their identity. This is the only record I have of this bird in this county.

(2) *Larus argentatus.*—Herring Gull. Common visitant throughout the year. Individuals appear each year in Branch Brook Park, one of Essex's large recreation centers, and on the Great Piece Meadows during the winter months. Is a common visitant along the Passaic River from Nutley to Newark Bay throughout the year.

(3) *Anas obscura.*—Black Duck. Rare winter migrant. Occasionally found on the Great Piece Meadows near Pine Brook. A pair was seen resting on a small pond in East Orange on December 16, 1906.

(4) *Branta canadensis.*—Canada Goose. A regular spring and fall migrant, appearing in early March and returning in November and early December.

(5) *Butorides virescens.*—Green Heron. Common summer visitant. Was first recorded on August 20, 1909, in Branch Brook Park. It later appeared in the same locality on September 9 of that year. It was found in this park on September 10 and 11 of this year and also at Davey's Pond on August 29.

(6) *Gallinago delicata.*—Wilson's Snipe. A common migrant and summer visitant.

(7) *Actitis macularia.*—Spotted Sandpiper. A rare summer resident, chiefly a common transient visitant. Found nest in a cornfield near Clinton on June 12, 1906, with three young just out of the shell and one unbroken egg. Most abundant in late June and early July.

(8) *Oxyechus vociferus.*—Killdeer. A rather rare transient visitant. First appeared on a farm on the outskirts of Bloomfield on July 3, 1902. It next appeared at the reservoir in the South Mountain Reservation, another of Essex's large parks, on July 18, 1909, and on March 6, 1910 a pair were found near the waterworks in East Orange.

(9) *Colinus virginianus.*—Bob-white. Formerly a common permanent resident, but now only a rare visitant in the farming districts where food is available.

(10) *Zenaidura macroura.*—Mourning Dove. Was formerly a common summer resident now only a transient visitant. When I first began making observations in 1902 this bird was fairly abundant during migrations and July and August, but within the last five years I have record of finding only ten individuals in the entire county, and these were taken at such times as would indicate the bird as only a transient visitant. No nests have been found since 1903.

(11) *Circus hudsonicus.*—Marsh Hawk. Permanent resident. Most common along the Newark Bay and on the Great Piece Meadows. Never found breeding.

(12) *Accipiter velox.*—Sharp-shinned Hawk. A common permanent resident. Have never located a nest of this species, although I am advised by a good authority that they did nest near Eagle Rock in the Orange Mountains in 1905 and 1906.

(13) *Buteo borealis.*—Red-tailed Hawk. A rare summer visitant. Have only found two specimens. One in East Orange on July 10, 1908. This bird was busily engaged in feeding on a freshly killed domestic rabbit and did not heed my approach until with fifteen paces. I approached as quietly as possible and obtained a fair view of the markings of the bird and established its identity. The other bird was shot by a boy in Verona on November 15, 1908. The shot had destroyed the feathers to such an extent that it was useless from the standpoint of the taxidermist.

(14) *Archibuteo lagopus sancti-johannis.*—Rough-legged Hawk. An uncommon summer visitant.

(15) *Falco sparverius.*—Sparrow Hawk. A common permanent resident. Pair with young found in large maple in East Orange on June 15, 1910. Have found that locally this little hawk prefers the telegraph wires for points of vantage when in search of food.

(16) *Syrnium varium.*—Barred Owl. An irregular visitant. On November 17, 18 and 19, 1908, one was about my home constantly and then disappeared. None were again seen until June 2, 1910, when a pair were present for about a half day.

(17) *Megascops asio.*—Screech Owl. A rather common permanent resident. A pair found nesting in decayed oak in Bloomfield during April, 1905.

(18) *Coccyzus americanus.*—Yellow-billed Cuckoo. A common summer resident. Found nest with three eggs in West Orange on June 2, 1907. This is the only nesting record I have.

(19) *Coccyzus erythrophthalmus.*—Black-billed Cuckoo. An uncommon summer resident. Abundant in 1906 and 1909. Other years about ten were recorded each season. No breeding record for the county.

(20) *Ceryle alcyon.*—Belted Kingfisher. A common summer resident. Found nesting in Glen Ridge and Verona in 1903.

(21) *Dryobates villosus.*—Hairy Woodpecker. A rather uncommon permanent resident.

(22) *Dryobates pubescens medianus.*—Downy Woodpecker. A common permanent resident. Found nesting in several isolated spots in South Mountain Reservation in 1906 and 1907. These are the only breeding records for the county.

(23) *Melanerpes erythrocephalus.*—Red-headed Woodpecker. A rather uncommon resident. Most abundant in May and June. No record of nesting.

(24) *Colaptes auratus luteus.*—Northern Flicker. Common permanent resident. Nests in all available places throughout the section.

(25) *Anstrostomus vociferus.*—Whippoorwill. An occasional summer resident, usually a common transient visitant. Located two sets of eggs in 1906 and one in 1909 on the ground in a small clearing in a patch of timberland in West Orange.

(26) *Chordeiles virginianus.*—Nighthawk. A common summer resident. Have no record of its nesting, but the birds are seen almost daily during June and July, both in Newark and over the immediate vicinity feeding on mosquitoes, which infest this neighborhood in great numbers.

(27) *Chætura pelagica.*—Chimney Swift. A common summer resident. Pairs nest in a number of the unused chimneys throughout the county. Have nested in my own chimney each year as far back as I can recall.

(28) *Trochilus colubris.*—Ruby-throated Hummingbird. A common summer resident. Not as abundant this year as formerly.

(29) *Tyrannus tyrannus.*—Kingbird. A common summer resident. Have no record of its breeding within the county.

(30) *Myiarchus crinitus.*—Crested Flycatcher. A common summer resident in the wooded sections.

(31) *Sayornis phœbe.*—Phœbe. A common summer resident. Arrives about March 20 and remains with us until November 1. Nests under bridges and in sheds in the more rural parts of the county.

(32) *Horizopus virens.*—Wood Pewee. A common summer resident. Has nested for four consecutive years in Bloomfield on the horizontal branches of the Honey Locust.

(33) *Empidonax flaviventris.*—Yellow-bellied Flycatcher. A rare summer visitant. Only found on September 8, 1910, in Bloomfield in a copse of Honey Locust.

(34) *Empidonax minimus.*—Least Flycatcher. A common summer resident. Breeds throughout the county.

(35) *Cyanocitta cristata.*—Blue Jay. A common permanent resident. Most abundant in spring and autumn. Have no record of its nesting in the county.

(36) *Corvus brachyrhynchos.*—American Crow. A common permanent resident. Nests throughout the county in the more rural sections.

(37) *Sturnus vulgaris.*—Starling. Formerly quite rare, but now an abundant permanent resident. Nests in deserted woodpecker holes, hollow trees, bird boxes and on the station poles of the telephone companies. Have record of seven conflicts between these birds and *Colaptes a. luteus* and *Sialia sialis* wherein the last two named species have been ousted by these exotics. They have one very apparent redeeming feature, which covers up a lot of their misdemeanors, such as demoralizing our own birds, roosting over the sidewalks in the shade trees and on the protected eaves of buildings and making unsightly marks from their excrement, and various other objectionable practices, and this is their relentless war upon the *Passer domesticus.* Since these birds have become abundant the sparrows have been continually harassed and are seeking new sections where they may live undisturbed.

(38) *Dolichonyx oryzivorus.*—Bobolink. A common transient visitant.

(39) *Molothrus ater.*—Cowbird. Common summer resident. Have found their eggs in sets of *Vireo olivaceus, Dendroica æstiva* and *Setophaga ruticilla.*

(40) *Agelaius phœniceus.*—Red-winged Blackbird. A common summer resident. Usually in the marshy sections. Have found it breeding on the Great Piece and Newark Meadows and in Branch Brook Park.

(41) *Sturnella magna.*—Meadowlark. A common summer resident. Also a rare winter visitant. Breeds in the sparsely settled parts.

(42) *Icterus spurius.*—Orchard Oriole. Formerly a common summer resident, now only a visitant. Found a nest and three young in Bloomfield on May 30, 1904.

(43) *Icterus galbula.*—Baltimore Oriole. A common summer resident. Nests throughout the county in all sections.

(44) *Euphagus carolinus.*—Rusty Blackbird. A common visitant during migrations.

(45) *Quiscalus quiscula.*—Purple Grackle. Our most common blackbird. Has nested in Bloomfield for the past three years in a patch of evergreens.

(46) *Quiscalus quiscula aneus.*—Bronzed Grackle. An occasional visitant during migrations.

(47) *Carpodacus purpureus.*—Purple Finch. An uncommon migrant and winter visitant.

(48) *Loxia curvirostra minor.*—American Crossbill. Found in a group of conifers in Bloomfield only on December 28, 1904.

(49) *Acanthis linaria.*—Redpoll. Rare winter visitant. Only found on March 5, 1905, at Silver Lake.

(50) *Astragalinus tristis.*—American Goldfinch. A common summer resident and winter visitant.

(51) *Passerina nivalis.*—Snowflake. A rare winter visitant. Flocks found only on December 28, 1902, and February 19, 1905, at Bloomfield.

(52) *Coturniculus savannarum passerinus.*—Grasshopper Sparrow. A rare summer visitant. Only found on May 16, 1909, in a clump of meadow grass near the Passaic River just above Newark Bay.

(54) *Zonotrichia leucophrys.*—White-crowned Sparrow. A rare visitant. Only found on May 11, 1909.

(55) *Zonotrichia albicollis.*—White-throated Sparrow. A common winter resident. Also abundant during migrations. Rare in summer.

(56) *Spizella monticola.*—Tree Sparrow. A common winter resident.

(57) *Spizella socialis.*—Chipping Sparrow. A common summer resident. Breeds in numerous places throughout the county.

(58) *Spizella pusilla.*—Field Sparrow. A common summer resident. Breeds in open fields and in hedgerows throughout the county, especially in the rural districts.

(59) *Junco hyemalis.*—Slate-colored Junco. An abundant winter resident.

(60) *Melospiza cinerea melodia.*—Song Sparrow. A common summer resident. Also present in sheltered localities during the winter. Nests throughout the county.

(61) *Melospiza georgiana.*—Swamp Sparrow. Common summer resident. Breeds in the low lands and near streams.

(62) *Passerella iliaca.*—Fox Sparrow. Common during migrations. Rare winter visitant.

(63) *Pipilo erythrophthalmus.*—Towhee. A common summer resident. Nests in blackberry brambles in many parts of the county.

(66) *Piranga erythromelas.*—Scarlet Tanager. Common summer resident. Found pair with family of three about a week old on July 18, 1909, in South Mountain Reservation. This is the only breeding record I have.

(67) *Petrochelidon lunifrons.*—Cliff Swallow. Occasionally seen during migrations.

(68) *Hirundo erythrogastra.*—Barn Swallow. Abundant summer resident. Nests in open barns and hay-lofts with easy access, in rural sections of the county.

(69) *Iridoprocne bicolor.*—Tree Swallow. A common summer resident. Most abundant in fall it is seen daily in vast numbers flying from the west to the Newark Meadows, where they roost. Nest on Great Peace Meadows in hollow trees.

(70) *Riparia riparia.*—Bank Swallow. A common summer resident. Nests under bridges and in the canal locks in several places in the county.

(71) *Lanius borealis.*—Northern Shrike. Rare winter visitant. only specimen found on February 7, 1906, at Bloomfield.

(72) *Ampelis cedrorum.*—Cedar Waxwing. Resident where found. A pair nested in a mulberry at Bloomfield during May, 1904. This nest I still have in my collection.

(73) *Vireo olivaceus.*—Red-eyed Vireo. A common summer resident. Their pensile nests may be found in many places throughout the county. Have found this species is greatly imposed upon by the *Molothrus ater*. Have located six nests with eggs of the Cowbird present.

(74) *Vireo flavifrons.*—Yellow-throated Vireo. A common summer resident. Nests in shade trees along highways and much traveled thoroughfares in the residential sections.

(75) *Vireo gilvus.*—Warbling Vireo. A rare summer visitant..

(76) *Mniotilta varia.*—Black and White Warbler. A common migrant and occasional summer visitant.

(77) *Helmitheros vermivorus.*—Worm-eating Warbler. A rare migrant.

(78) *Helminthophila pinus.*—Blue-winged Warbler. An occasional summer resident, usually only a migrant. Arrival May 5 to 16th.

(79) *Helminthophila chrysoptera.*—Golden-winged Warbler. A rare migrant. Arrives about May 7.

(80) *Compsothlypis americana.*—Parula Warbler. A common migrant. Arrival May 5 to 15th.

(81) *Dendroica æstiva.*—Yellow Warbler. A common summer resident. Nests throughout the county. Arrives from May 1 to 5th. Departs about September 1.

(82) *Dendroica cærulescens.*—Black-throated Blue Warbler. A common vernal migrant. Rare in autumn. Arrives May 7 to 16th.

(83) *Dendroica coronata.*—Myrtle Warbler. The commonest of all warblers during migrations. Arrives April 21 to May 10. Departs about November 15.

(84) *Dendroica maculosa.*—Magnolia Warbler. A common vernal migrant. Arrives May 7 to 15th.

(85) *Dendroica pensylvanica.*—Chestnut-sided Warbler. An occasional summer resident. Most abundant in May and early June. Arrives May 2 to 15th.

(86) *Dendroica castanea.*—Bay-breasted Warbler. A rare migrant. Arrives May 4 to 21st.

(87) *Dendroica striata.*—Black-poll Warbler. A rather rare migrant. More abundant some years than others. Arrives May 6 to 24th.

(88) *Dendroica virens.*—Black-throated Green Warbler. A common migrant. Arrives May 4 to 15th.

(89) *Dendroica vigorsii.*—Pine Warbler. A rather common vernal migrant. Rare in autumn. Arrives May 5 to 13th.

(90) *Dendroica palmarum hypochrysea.*—Yellow Palm Warbler. The earliest warbler to appear in the vernal migrations. Rare in autumn. Arrives April 12 to 22d.

(91) *Sciurus aurocapillus.*—Oven-bird. The commonest of breeding warblers. Nest found at Upper Montclair on June 2, 1906. Arrives May 1 to 15th.

(92) *Seiurus noveboracensis.*—Water-Thrush. A rare visitant. Found only on July 10, 1902, in South Orange.

(93) *Geothlypis trichas.*—Maryland Yellow-throat. A common summer resident. Nests in many places throughout the county.

(94) *Icteria virens.*—Yellow-breasted Chat. A common summer resident. Have no nesting record.

(95) *Wilsonia mitrata.*—Hooded Warbler. A rather common migrant. Arrives May 7 to 19th.

(96) *Wilsonia canadensis.*—Canadian Warbler. A common vernal migrant. Arrives May 10 to 26th.

(98) *Setophaga ruticilla.*—Redstart. A rather common summer resident. Found nest at Bloomfield on May 20, 1908.

(99) *Anthus pensilvanicus.*—Pipit. A common summer resident in the more sparsely settled sections. No record of nesting.

(100) *Galeoscoptes carolinensis.*—Catbird. A common summer resident. Nests throughout the county.

(101 *Toxostoma rufum.*—Brown Thrasher. A rather common summer resident. Nests in the more rural sections of the county.

(102) *Thryothorus ludovicianus.*—Carolina Wren. A rare visitant. Only record made at Bloomfield on September 18, 1905.

(103) *Troglodytes ædon.*—House Wren. A common summer resident. Nests throughout the county.

(104) *Telmatodytes palustris.*—Long-billed Marsh Wren. A common summer resident. Breeds in the Great Piece and Newark Meadows in large numbers.

(105) *Certhia familiaris americana.*—Brown Creeper. A rather common winter visitant

(106) *Sitta carolinensis.*—White-breasted Nuthatch. A common winter resident. Rare visitant in summer.

(107) *Bæolophus bicolor.* Tufted Titmouse. A winter visitant. Found it only on February 27, 1910. Mr. C. A. Merrill of East Orange, advises me that he has seen specimens throughout the county on numerous occasions.

(108) *Parus atricapillus.*—Black-capped Chickadee. A common winter resident. Also quite common in summer. Found nesting on South Mountain Reservation on April 20, 1903. Only record I have.

(109) *Regulus satrapa.*—Golden-crowned Kinglet. A common winter visitant.

(110) *Regulus calendula.*—Ruby-crowned Kinglet. A common migrant.

(111) *Hylocichla mustelina.*—Wood Thrush. A common summer resident. Nests in many places throughout the county.

(112) *Hylocichla fuscescens.*—Wilson's Thrush. A rather common summer resident. More abundant some years than others.

(113) *Hylocichla alicia.*—Gray-cheeked Thrush. A rather common migrant.

(114) *Hylocichla swainsonii.*—Olive-backed Thrush. A common migrant.

(115) *Hylocichla guttata pallasii.*—Hermit Thrush. A common migrant.

(116) *Merula migratoria.*—Robin. An abundant summer resident. Occasional winter visitant.

(117) *Sialia sialis.*—Bluebird. An abundant resident throughout the year.

(118) *Sphyrapicus varius.*—Yellow-bellied Sapsucker. A rather common permanent resident. Found nest with young in South Mountain on May 2, 1903.

Bloomfield, N. J.

THE WILSON BULLETIN

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Editorial

To the many friends and correspondents who have shown their solicitude for the editor in his long illness, the announcement is here made that the probability of complete speedy recovery is excellent. It is almost worth while being desperately ill to learn how many are ones friends!

The editor also wishes to express his gratitude to all for your patience over the delay in the appearance of the Bulletin, and delay in replying to correspondence, during the long interval.

It is with genuine satisfaction that the editor presents the first article in this double number, because it is without question the most notable paper upon field studies which has been published, and because it illustrates what the Wilson Club stands for. Studies along similar lines are possible to many of us. Are we equal to the opportunity.

Acknowledgement is here made of books, pamphlets and papers which have been received, but which must await renewed strength for review. Ornithological literature is becoming pleasantly abundant!

The editor hopes to be able to present a full report of the studies of bird movements on Pelee Island, which occupied a class of ten students the whole of August and part of September. It was expected that this report would be ready for this issue, but the unkindness of the island in presenting to him who was to correlate the facts gathered, with the germs of typhoid, prevented.

We are glad to announce that the March issue of the Bulletin will contain a paper based upon careful studies of the birds in southern Illinois, in their relation to plant associations, by Frederick C. Gates of the University of Michigan, besides other papers and notes of exceptional value and interest. We have inside information that an increasing number of persons are conducting summer studies along the line of the relations of the birds to their environment. Such studies should be written and submitted to the Bulletin for publication.

Reviews

"Distribution and Migration of North American Shorebirds." By Wells W. Cooke, Biol. Survey Bull. No. 13.

This pamphlet contains a very thorough and painstaking compilation of ornithological data on the Shorebirds of North America. Under every species is noted the breeding and winter range, the migration range, the spring and fall migration It is the first pamphlet that has done the numerous records to be found in the Wilson Bulletin fair justice, in great contrast to Ridgway's Birds of Middle and North America and the new A. O. U. Check List, where records in the Bulletin have been persistently ignored, in the face of the fact that all records and serious articles contain scientific names. Nevertheless, as far as Ohio is concerned, a few errors and omissions can be found, e.g. the earliest Ohio state record in the spring for *Totanus melanoleucus* is March 14, 1899, *Pisobia minutilla*, April 19, 1909, for *Bartramia longicauda*, March 21, 1902, for *Pisobia maculata*, March 24, 1909, etc. But we do not want to pick flaws, and believe that these little faults do not

detract from the value of the volume, which conains a vast amount of good information and should be in the hands of every bird student in the land. W. F. H.

Check List of North American Birds. Third Edition Revised August, 1910.

After preparation of four years the "new" Check List at last has made its appearance. We are both delighted with it and disappointed. Delighted with the nine changes in the construction of the new edition as enumerated on pages 11 and 12, disappointed because some other changes, timely and needed, indeed, have not been forthcoming. It may perhaps seem superfluous to give another review of this work, since an extended review of it has already appeared in the Auk. Unfortunately, however, the reviewer in the Auk is himself a member (in fact the chairman of the committee) which had the preparation o fthe Check List in hands, hence, although we have the greatest personal respect and admiration for him, cannot though he may strenuously strive to be absolutely impartial in his review. On the other hand we well know that the Reviews signed J. A. A. stand exactly for the views of J. A. A., and do not necessarily have back of them the authority of the entire A. O. U. Likswise the initials here appended indicate only the writer as responsible for the stand taken.

The List as a whole is a great improvement over the former editions, as in giving determination of type species, stating type localities and similar other matters. A purely typographical error is found on page 262, the Genitive of Gambel must be gambeli and not gambel. An inconsisteney is the accentuation of Calídris in Calidris leucophæa and Cálidris in Vireosylva calidris, it should be calídris in both cases. The name of the Vesper Sparrow must be Poœcétes and "not" Poœcetés, for Poa and oiketes can never be contracted into a word having the accent on the last syllable. To any scholar the perpetuation of such cacographical errors as Leptotila and Harelda and others is a source of grief, for no matter what the rules are governing our List in bird names in such cases, it is no more than proper that such glaring mistakes should be wiped out forever; or if the rules of nomenclature forbid the correct spelling of names, then change these rules.

We had fervently hoped to see a modern system of classification used in the Check List, for to place the Striges with the Falcones and Sarcorhamphi or better between the Falcones and Coccyges, where they certainly do not belong, and similar instances are numerous enough, and then to excuse the retaining of the old system by saying "that all present systems of classification in orni-

thology are admittedly tentative" is certainly weak. "To use the old Check List system unchanged for the sake of convenience" is a very lame excuse for not giving us a modern and proper classification. Though this is bad enough, another disappointment is still worse, and neither justifiable nor excusable, the one pointed out by the late Dr. Elliot Coues in 1897 (Auk Vol. XIV, p. 229) viz. "that of passing from the lowest to the highest forms as applied to the families, but not to the genera within these families, a reversal of sequence of families coupled with non-reversal of the sequence of genera within the families." Dr. Coues quotes as an illustration the Anatidæ, and it is plain to any thinking person that he was correct in his remarks. Truly in regard to classification of birds—for the whole structure of a bird must be taken into consideration, not merely the external characters—the new Check List is a disappointment, and it will be a long time before it will be accepted as an authority along these lines!

The Geographical Ranges are admittedly difficult to work out, but we think had the authors consulted any Ohio ornithologist, as they did the Illinois men, or the pages of the Wilson Bulletin, errors and omissions concerning this state would have been avoided. The Chuck-will's-widow is erroneously credited to Ohio; the Anhinga, the Surf Scoter, the Brant, Cory's Least Bittern, Egret, Little Blue Heron, Ruff, Swallow-tailed Kite, Western Redtail, Goshawk, Red-cockaded Woodpecker, Yellow-headed Blackbird, Smith's Longspur, Leconte's Sparrow, Nelson's Sparrow, and many other species have been taken in Ohio and should be credited with an accidental, in some cases as the Little Blue Heron, with a casual occurrence in Ohio. The Prairie Chicken still exists in Michigan, the Olive-backed Thrush is of accidental occurrence in Europe-Russia for instance,—and the European Whitefronted Goose, if it is of doubtful record only from Eastern Greenland, should be relegated to the hypothetical list.

We had also hoped to see a rigid investigation into the standing and value of some subspecies. The Willow Goldfinch, the Desert Sparrow Hawk, and others too numerous to mention, should not be worthy of a name. Fifteen years ago the Scaup Duck of America was considered a subspecies with a name (nearctica), the Herring Gull likewise (smithsonianus) and any attempt to claim the futility of that procedure would have been scorned and castigated—but today we know their exact status through a thorough and unprejudiced investigation. Why not apply it to these cases of the present day? Many of these subspecific distinctions exist—as the writer well knows—and are of sufficient value to call for a name, many are only a matter of personal vanity or personal keenness of eye-sight, or ability to distinguish various unmentionable shades of one and

the same color, but all so minute and microscopic that they are not worthy of a name, but are merely what the Germans so aptly call "Gelehrtenspielereien." The millennium, however, is still a year or two distant, and up to that time we will have to be contented with merely stating our disappointments and waiting for wiser heads to solve the many problems that vex us and keep us from reaching perfection in our beloved science of ornithology.

W. F. D.

Field Notes

A LITTLE HELP FROM THE CROWS.—It is all very well for the Easterner to saunter out into the grove on a mild April morning and mark down this years' crop of Crows' nests, all smugly outlined against a clear sky. Be the birds ever so secretive, the stark outlines of a Crow's nest in crotch of beech or elm are easy oological marks, especially if set off by a telltale black "handle." But Crows' nests in Western Washington are none of the commonest, and when the birds hide them, as they usually do, in the depths of fir trees (and sometimes at forbidding heights) the inquiring bird-man naturally welcomes a little assistance in the search.

On the "prairies" of Pierce County the Douglas firs renounce their Olympian disdain and present heights that may be scanned by frail mortals not yet equipped with flying machines. But even here the quest is not easy. The firs, though dwarfed in height, are of very stocky growth, and afford eye-proof shelter for even a Crow's nest. A certain stretch of prairie, dotted here and there with fir clumps composed of trees from fifty to eighty feet in height, was evidently the breeding haunt of a small colony of Western Crows (*Corvus brachyrhynchos hesperis*). (The place is about ten miles from tide water, and the birds are really intermediate in size between *C. b. hesperis* and *C. b. caurinus*, but their voices are clear and their range is strictly inland).

I had lazily noted the activities of this colony on a previous visit, but I was ill-prepared to hear the insistent hunger cry of a manifest young Crow so early in the season, April 18, 1910, proceeding as it did from the top of a dense fir tree, one of a grove in which I lay watching for Kinglets. The tree was screened from view, but I soon located it by the sound, and eagerly drank in the ancient wail of the youngster while one of the parent birds answered warily from a distance.

It really was not worth while to climb the tree, but Bird-boy (*ornithologicus secundus maybe*) was very anxious to see a young Crow, and I went up. Judge of my surprise when a full grown Crow

flapped off the nest and uncovered a single fresh egg! It was the female, new to her duties, who clamored for food, and perhaps for sympathy, from her dallying lord.

Once discovered the method proved the touchstone of success. A stealthy approach was made later to another part of the colony and three females were heard uttering the hunger-cry, *An(h)*, *An(h)*, *An(h)*. A male Crow detected the ambuscade and shouted a warning, whereupon one of the brooders promptly subsided. Other birds, presumably males, came hurrying up and a general alarm was sounded, but one female, a spoiled darling, insisted upon having attention from her reluctant mate. He, poor fowl, stood the teasing as long as he could, then yielded at last in a moment of weakness and paid a surreptitious visit to a certain treetop, while the man took notes. When I found that the nest, perfectly concealed at a height of sixty feet, contained a single greenish blue egg, as immaculate as a Robin's, I pardoned the young husband's indulgence.

Never, ah, never, does a man need the prophetic gift as when he is gazing covetously, doubtfully, upon a "short" set. If he takes it he knows he will upbraid himself for his incontinence the rest of his days. If he leaves it he braves a thousand mischances, jays, squirrels, storms, worst of all the jealous owners themselves. Well, I took the latter alternative, and upon returning ten days later, gazed into the emptiest nest I ever saw

It was notable also upon the later visit that there was no more shouting of "Here am I" on the part of the sitting birds. They had learned their lesson.

Blaine, Wash. W. Leon Dawson.

Some Illinois Cardinals.—As far as I am able to gather, the Cardinal seems to be considered a rather rare bird about Chicago. The meager literature at my disposal classes it thus, and I have heard it referred to by collectors as a "Capture" well worth while. In his "Birds of the Chicago Area," Mr. F. M. Woodruff sums up the Cardinals' status thus:

"I have heard of the Cardinal being taken in our public parks, and have myself secured one specimen, which showed, however, unmistakable signs of having been an escaped cage bird. Mr. J. Grafton Parker, Jr., has a specimen of this species which was taken at Kouts, Indiana, on December 11, 1893. Some years ago I found a nest of the Cardinal at River Forest, Illinois. Mr. O. M. Schantz informs me that in the year 1904 there were two pairs nesting at Riverside, Illinois."

Mr. Woodruff wrote the above in the fall of 1906 and we see that at that time the Cardinal was looked upon as by no means a common species. Has it increased about here during the past four years? If not it seems remarkable that I should have wakled into their hiding place the first hing. Their name appears upon the first list of Summer Birds that I made in Illinois! And I, a stranger in the Chicago Area, thought that I had seen a "Common" bird!

I was following the bank of the Desplaines River at River Forest, Illinois, when I heard a Cardinal whistle. I straightway entered his name upon my list and passed on: without so much as a look at him. Back in the Delaware Valley he had ever been a familiar feature in my landscape—winter and summer—and I failed to recognize in that old *familiar* chirp the chirp of a *rare* bird. Perhaps these are the same River Forest Cardinals that built the nest referred to by Mr. Woodruff, above?

However that may be I found the Cardinals there on June 19, 1910, and saw them again on June 24, and they were still about the same woodland on October 30, 1910. It was a novel experience to meet this old bird friend in a new field and discover that he had risen from the rank of commonplace to hold the exalted position of a rarity. CHRESWELL J. HUNT.

MIGRATION NOTES FROM NORTHERN NEW JERSEY.—Last winter was notable for its great scarcity of bird-life. Many of our permanent residents were much scarcer than usual, or entirely missing and at the same time, northern birds were equally hard to find.

The only northern species that I saw more frequently than usual was the Northern Shrike. Perhaps that may, in a measure, account for the scarcity of some of the smaller birds.

The ferocity of the bird can be illustrated by an incident I witnessed on March 12 of this year. Some Robins were picking worms in a bush-grown field when I noticed that something was alarming them. They gave their alarm-call and flew up into the bushes. The cause of this disturbance was a Shrike that had taken his station in a tree and was evidently looking for a meal. I did not suppose that he would attack a bird of his own size, but the contrary was the case, for when a Robin flew out of a bush the Shrike was after him and actually struck at him, though the Robin escaped by flying into some thick bushes.

It was my pleasure, during the past winter, to record two very unusual occurrences—a Brown Thrasher seen on January 2, and again on February 4, and a Red-winged Blackbird on January 28.

The warm weather of early March brought Bluebirds, Robins, Grackles and Red-wings in unusual numbers. It also hastened the

northward migration of several species—Brown Creepers, Winter Wrens, and Fox Sparrows all left us during the last week of March. This is the first season in which I have failed to record all of these in April.

The latter part of April and most of May were unfavorable for migrations, and birds that were due to arrive by the first of the week of May were nearly all behind their schedule. It was unusual to see Hermit Thrush as late as May 14, or Yellow Palm Warbler on May 4. I have never before noted the latter species after April.

The Warblers were not so numerous as usual during the past spring, due in part to the fact that their arrival was late, and consequently the season was a short one. The always common Myrtles and Black-polls were unusually abundant, and the generally rare Bay-breasted were fairly common on these successive days, May 23, 24 and 25. But some species I missed entirely, or noted only one or two individuals. Warbling Vireos are heard in the shade-trees of our residential streets this summer after an absence of years.

An incident that is worth putting on record, is the appearance, on June 18, of the Red Crossbill. These birds are sometimes present, in large flocks, during the winter, but were not here last season. Their presence here at this time of year is not to be looked for, but their habits are very erratic, and they have been known to nest far south of their usual breeding-range.

The last spring migrants, Black-poll Warblers, passed northward the first week of June, and now in a few weeks we shall be looking for the first autumn migrations, when the Tree Swallows begin to flock upon our meadows about July 20.

Morristown, N. J. R. C. Caskey.

Squatarola squatarola in Ohio.—This species is considered rare in Ohio. Wheaton reports in 1882, that Kirtland, Langdon, Drury, and Freeman speaks of its rarity; he met with but one specimen in August, 1875. Oliver Davie took one specimen May 12, 1876, in Columbus. Dawson has nothing to add to this in his "Birds of Ohio" (1904). Jones in Wilson Bulletin September, 1909, page 130, gives May 16 and 18, 1908, as migration dates, but does not say whether any specimens were taken or not. It gives me great pleasure to add two records to these. On September 1, 1901, I met with two birds of this species on the Grand Reservoir, in fierce, squally weather, and this was verified by the actual taking of a female on September 16, 1910, at the Loramie Reservoir by Mr. F. A. Anthony of Loramie, Shelby County, Ohio. This last

specimen is now in my collection, and in the light of the above statements, seems to be the third time only that a specimen has actually been taken in the state of Ohio. The diagnostic marks of this bird to distinguish it from the American Golden Plover as given in the books, viz. the rudimentary fourth toe, heavier legs and bill, will do all right when the bird is in your hand, but not in the field. There the white upper tail-coverts serve to distinguish it from the Golden Plover, whose upper tail-coverts are concolor with the back. The German birdbooks point out this fact, the Americans do not, and still at a distance it will prove the *one* diagnostic mark. W. F. HENNINGER.

GREEN HERON IN NEW JERSEY. It may be of interest to some of your New Jersey readers to know that the Green Heron (*Butorides virescens*) is becoming quite common in several localities in the northern part of the state. I have personally located individuals in Branch Brook Park, Newark, N. J., on August 20 and September 9, 1909, and on September 10 and 11 of this year. At Pompton Lake on September 13, 1909, two individuals were seen, and at Greenwood Lake on September 14, 1909, three more were found. At Davey's Pond, in the northern part of Bloomfield, one was observed on August 29, 1910, and, in addition to the above records, several were reported to have been shot at Echo Lake during October of 1909. LOUIS S. KOHLER.

September 13, 1910. Bloomfield, N. J.

NAMES PROPOSED FOR MEMBERSHIP.

The following nominations for active membership in the Wilson Club have been approved by the Executive Committee. Members will therefore confer a favor in notifying the Secretary at once if objections to any of these are offered. In the absence of objection, candidates are considered duly elected, according to our Constitution:

Frank M. Chapman, American Museum of Natural History, New York City.

William Dreuth, 1845 Oakdale Ave., Chicago, Ill.

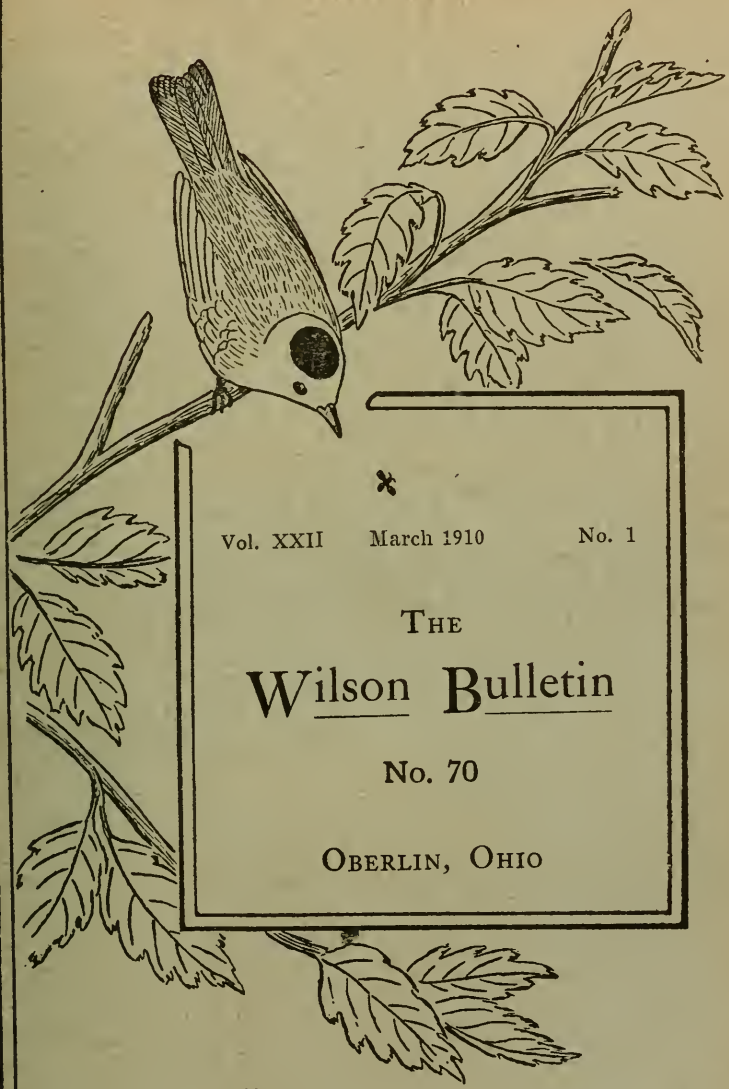
Ruthven Deane, 135 Adams St., Chicago, Ill.

Prof. James S. Hine, Ohio State University, Columbus, Ohio.

Prof. Wilfred H. Osgood, Dept. Zoology, Field Museum, Chicago, Ill.

Rev. P. B. Peabody, Blue Rapids, Kansas.

Complete



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The Wilson Bulletin

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Oberlin, Ohio

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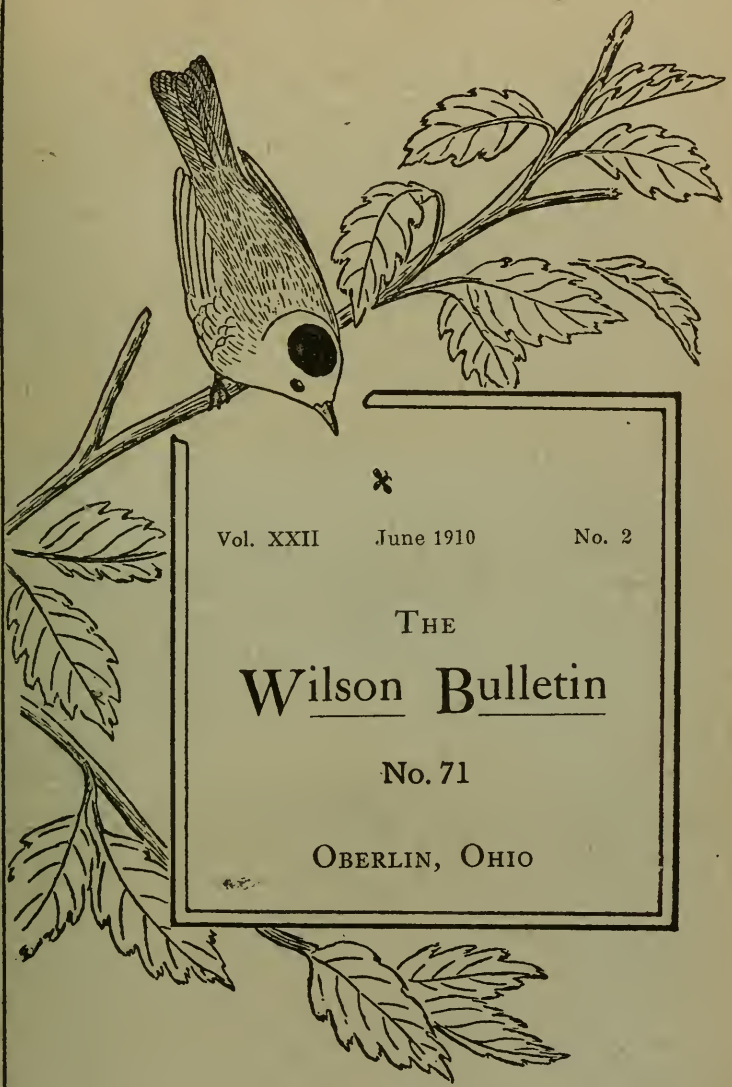

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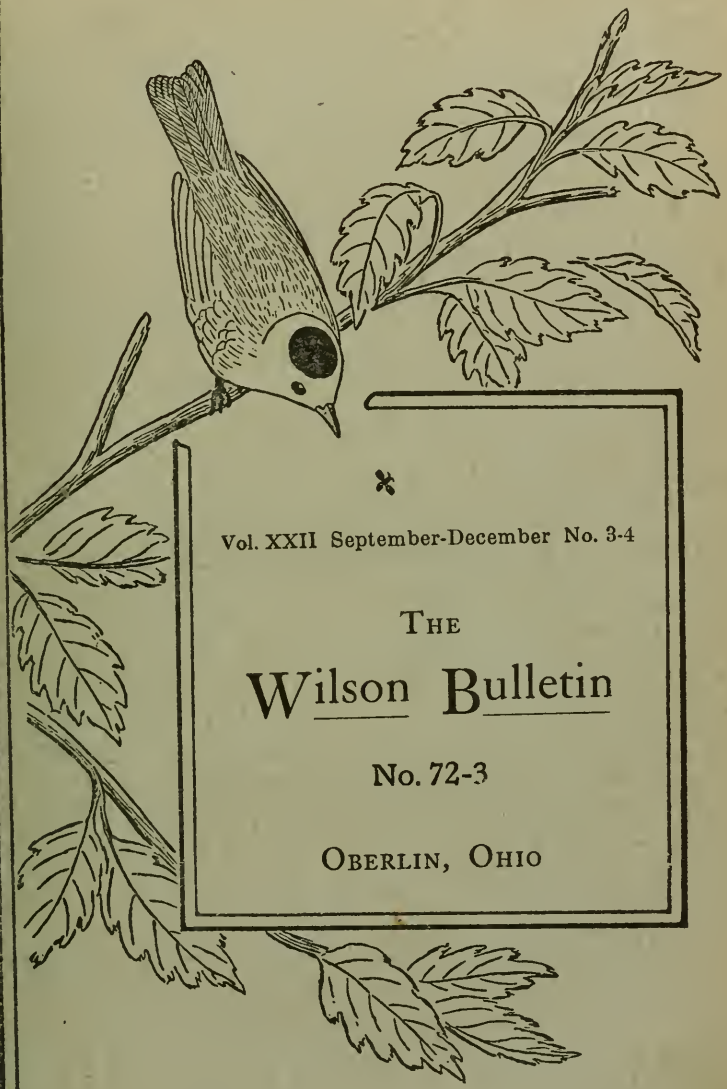

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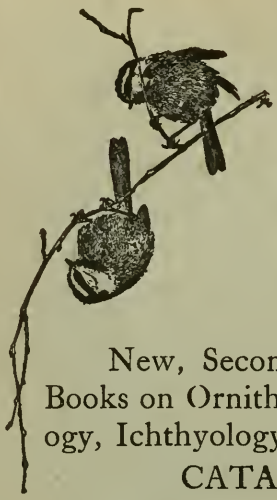

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